

STIC Search Report Biotech-Chem Library

STIC Database Tracking Number: 167420

TO: Lorraine Spector Location: 4d55 / 4c70

Monday, October 03, 2005

Art Unit: 1647

Phone: 571-272-0893

Serial Number: 09 / 674377

From: Jan Delaval

Location: Biotech-Chem Library

Remsen 1a51

Phone: 571-272-2504

jan.delaval@uspto.gov

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STIC-Biotech/ChemLib

From:

Spector, Lorraine

Sent:

Friday, September 30, 2005 1:42 PM

To:

STIC-Biotech/ChemLib

Subject:

SEARCH request for Serial No. 09/674377

STIC,

Please search SEQ ID NO: 1 and 2

- -pending
- -issued
- -commercial

Also, please align the two sequences with each other.

Thanks.

Lorraine Spector
571-272-0893
U.S. Patent and Trademark Office
Art Unit 1647
lorraine.spector@uspto.gov
Office: Remsen 4D-55
Mailbox: Remsen 4C-70

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Searcher:	an
Searcher Phone:	22504
Date Searcher Picke	d up: 10/3/08
Date completed:	6013/08
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endors and cost where applicable
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LEXIS/NEXIS:
SEQUENCE SYSTEM:
WWW/Internet:
Other (Specify):

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STIC SEARCH RESULTS FEEDBACK FORM

Biotech-Chem Library

Questions about the scope or the results of the search? Contact the searcher or contact:

Mary Hale, Information Branch Supervisor Remsen Bldg. 01 D86 571-272-2507

Volu	Intary Results Feedback Form
>	I am an examiner in Workgroup: Example: 1610
>	Relevant prior art found, search results used as follows:
	102 rejection
	103 rejection
	Cited as being of interest.
	Helped examiner better understand the invention.
	Helped examiner better understand the state of the art in their technology.
	Types of relevant prior art found: ☐ Foreign Patent(s)
	Non-Patent Literature (journal articles, conference proceedings, new product announcements etc.)
>	Relevant prior art not found:
	Results verified the lack of relevant prior art (helped determine patentability).
	Results were not useful in determining patentability or understanding the invention.
Coi	mments:

Drop off or send completed forms to STIC-Blotech-Chem; Library, Remsen Bldg:



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Title:
Perfect score:
Sequence:
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Maximum Match 100%
Listing first 45 summaries
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Copyright (c) 1993 - 2005 Compugen Ltd.
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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u-plasminogen acti	neurotrophic recep	hypothetical prote	plasma hyaluronan-	coagulation factor	plasma hyaluronan-	coagulation factor	hepatocyte growth	neurotrophic recep	t-plasminogen acti	coagulation factor	neurotrophic recep	ror-related recept	plasmin (EC 3.4.21	plasmin (EC 3.4.21

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A;Cross-references: GB:L02931; NID:g184033; PIDN:AAA52649.1; PID:g184034 R;Miyazawa, K.; Kitamura, A.; Naka, D.; Kitamura, N. Eur. J. Biochem. 197, 15-22, 1991 A;Title: An alternatively processed mRNA generated from human hepatocyte A;Reference number: S15443; MUID:91200041; PMID:1826653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Note: the authors translated the codon CAG for residue 727 as Glu A;Note: part of this sequence, including the amino end of both the alpha and R;Hartmann, G.; Naldini, L.; Weidher, K.M.; Sachs, M.; Vigna, E.; Comoglio, Proc. Natl. Acad. Sci. U.S.A. 89, 11574-11578, 1992 A;Title: A functional domain in the heavy chain of scatter factor/hepatocyte A;Reference number: 159214; MUID:93087571; PMID:1280830 A;Accession: 159214
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A;Residues: 86-91,329-344;356-363,'XX',366-370;425-434;442-447,'X',449-450;543-546,
R;Nakamura, T.; Nishizawa, T.; Hagiya, M.; Seki, T.; Shimonishi, M.; Sugimura, A.;
Nature 342, 440-443, 1989
A;Title: Molecular cloning and expression of human hepatocyte growth factor.
A;Reference number: S06794; MUID:90066676; PMID:2531289
A;Accession: S06794
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A;Residues: 32-43;53-58 <YOS>
A;Experimental source: plasma
R;Weidner, K.M.; Behrens, J.; Vandekerckhove, J.; Birchmeier, J. Cell Biol. 111, 2097-2108, 1990
A;Title: Scatter factor: molecular characteristics and effect A;Reference number: A37796; MUID:91035621; PMID:2146276
A;Accession: A37796
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   A; Note: does no
C; Superfamily:
                                                                                                                          A;Cross-references: GDB:127524; OMIM:142409
A;Map position: 7q21.1-7q21.1
A;Introns: 30/1, B5/2; 123/1; 161/2; 209/1;
C;Complex: disulfide-bonded heterodimer of
                                                                                                                                                                                                                                                                                                                                                A; Molecule type: mRNA
A; Residues: 161-166 <SHI>
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A;Status: preliminary; translated
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Molecule type: mRNA
A;Residues: 1-31,'HK',34-77,'N',79-292,'V',294-299,'M',301-316,'A',318-335,'K',337-386,
A;Cross-references: EMBL:X16323; NID:g32081; PIDN:CAA34387.1; PID:g32082
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                                                                                                C; Function:
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A; Residues: 1-288, 'ET' <MIY2>
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                                                                A; Description: stimulates mitosis of hepatocytes and other
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activity factor/macrophage
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Burgess, W.H.; Taylor, W.G.;
                                                                                                                                                                                                                                                                                                                      PIDN: AAB20169.1;
   stimulating protein
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A;Rolecule type: mRNA
A;Residues: 1-728 <SAS2>
A;Cross-references: UNIPROT:Q08048; GB:D10212;
A;Experimental source: fibroblast, COS-1 cell
A;Experimental source: JIPID, May 1993
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195, Setter, 34-43,

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A; Molecule type: protein A; Residues: 496-504 <SA2>

A; Accession: PC2064

A;Reference number: JC2117; MUID:94183257; PMID:8135822 A;Accession: JC2117

NID:g220435;

PIDN:BAA01064.1;

PID: g220436

factor

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hepatocyte growth factor precursor - mouse
N;Alternate names: hepapoietin A; Scatter factor
C;Species: Mus musculus (house mouse)
C;Date: 03-Mar-1993 #sequence revision 26-May-1994 #text_change 09-Jul-2004
C;Accession: JC2117; PC2064; A60185; S43416; S45521; S17173; S10966; I48758;
R;Sasaki, M.; Nishio, M.; Sasaki, T.; Enami, J.
Biochem. Biophys. Res. Commun. 199, 772-779, 1994
A;Title: Identification of mouse mammary fibroblast-derived mammary growth i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Keywords: alternative splicing; glycoprotein; growth fact F;1-31/Domain: signal sequence #status predicted <SIG> F;32-494,495-728/Product: hepatocyte growth factor #status F;32-494/Domain: alpha chain #status experimental <ACH> F;128-206/Domain: kringle homology <KR1> F;211-288/Domain: kringle homology <KR2>
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F;32/Modified site: pyrrolidone carboxylic acid
F;32/Modified site: carbohydrate (As
F;294,402;566,653/Binding site: carbohydrate (As
F;487-604/Disulfide bonds: #status predicted
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Pred. No. 1.9e-176;
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A; Molecule type: DNA
A; Residues: 1-30 < RSE
A; Cross-references: I
C; Complex: disulfide
C; Function:
A; Description: stimul
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A;Accession: S45521
A;Status: preliminar;
A;Molecule type: mRNV
A;Residues: 1-563,'H'
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C;Superfamily: hepatocyte growth factor/macrophage stimulating protein 1; kring
C;Keywords: alternative splicing; glycoprotein; growth factor; heterodimer; kri
F;1-32/Domain: signal sequence #status predicted <SIG>
F;56-495/496-728/Product: hepatocyte growth factor #status predicted <ACH>
F;56-495/Domain: kringle homology <KR1>
F;129-207/Domain: kringle homology <KR2>
F;129-207/Domain: kringle homology <KR2>
F;306-384/Domain: kringle homology <KR2>
F;306-384/Domain: kringle homology <KR3>
F;392-470/Domain: kringle homology <KR4>
F;496-728/Domain: kringle homology <KR4>
F;496-728/Domain: kringle homology <KR4>
F;496-728/Domain: kringle homology <KR4>
F;496-719/Domain: kringle homology <KR4-
F;496-719/Domain: kringle homolog
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A;Title: Molecular cloning and characterization of cDNA encoding mouse hepatocyte (A;Reference number: S43416; MUID:94060105; PMID:8241272
A;Accession: S43416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: protein
A; Residues: 496-507, 'X', 509-512, 'L', 514-516, 'X', 518-519 < NAT>
R; Plaschke-Schlutter, A; Behrens, J.; Gherardi, E.; Birchmeier, W
J. Biol. Chem. 270, 830-836, 1995
A; Title: Characterization of the scatter factor/hepatocyte growth
A; Reference number: 148758; MUID:95122532; PMID:7822318
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R;Coffer, A.; Fellows, J.; Young, S.; Pappin, D.; Rahman, D.
Biochem. J. 278, 35-41, 1991
A;Title: Purification and Characterization of biologically active scatter factor from A;Reference number: S17173; MUID:91354223; PMID:1831975
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R;Gherardi, E.; Stoker, M.
Nature 346, 228, 1990
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A; Molecule type:
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Superfamily: hepatocyte growth factor/macrophage stimulating protein 1; kringle hom;
Superfamily: hepatocyte growth factor/macrophage stimulating protein 1; kringle;
Keywords: alternative splicing; glycoprotein; growth factor; heterodimer; kringle;
$1.32/Domain: signal sequence #status predicted <SIG>
$1.32/Domain: signal sequence #status predicted <SIG>
$1.36-495,496-728/Product: hepatocyte growth factor #status predicted <ACH>
$1.36-495/Domain: hepatocyte growth factor alpha chain #status predicted <ACH>
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; Residues: 1-30 < RES>
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;Accession: A60185
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Residues: 1-563,'H',565-728
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Residues: 1-728 <LIU>
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66; MUID:90326152; PMID:2142751
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91.1%;
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Pred. No. 8.6e
21; Mismatches
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                                                                 YRGNGKNYMGNLSQTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPW
                                                                                                          QYPHKHDITPENFKCKDLRENYCRNPDGAESPWCFTTDPNIRVGYCSQIPKCDVSSGQDC
                                                                                                                         QYPHEHDMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSHGQDC
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                                                                                                                                                               YTLDPDTPWEYCAIKTCAHSAVNETDVPMETTECTQGQGEGYRGTSNTIWNGIPCQRWDS
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C;Date: 28-Sep-1990 #sequence_revision 18-Nov-1992 #text_charcyaccession: A35644; S13211
R;Tashiro, K; Hagiya, M; Nishizawa, T.; Seki, T.; Shimonisi Proc. Natl. Acad. Sci. U.S.A. 87, 3200-3204, 1990
A;Title: Deduced primary structure of rat hepatocyte growth A;Reference number: A35644; MUID:90222197; PMID:2139229
A;Accession. A35644 hepatocyte growth factor N;Alternate names: hepapo C;Species: Rattus norvegi C;Date: 28-Sep-1990 #sequ C;Accession: A35644; Sl32 A;Cross-references: UNIPROT:P17945; GB:D90102; GB:M32987; A;Note: the authors translated the codon GAG for residue . A; Molecule type: mRNA A; Residues: 1-728 < TAS> appatocyte growth factor precursor - rat Alternate names: hepapoietin A; scatter factor Species: Rattus norvegicus (Norway rat) Status: preliminary T.; Shimonishi, M.; Shimizu, #text_change ; NID:g220766; PIDN:BAA14133 70 as Gln, GAC for residue 09-Jul-2004 and expression S . . Nakamur of the

R;Okajima, A.; Miyazawa, K.; Kitamura, N. Eur. J. Biochem. 193, 375-381, 1990 A;Tille: Primary structure of rat hapatocyte growth factor A;Reference number: S13211; MUID:91031482; PMID:2146117 and induction g its mRNA

A;Reference number: \$13211; MUID:91031482; PMID:2146117
A;Accession: \$13211
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-728 cOKA>
A;Cross-references: EMBL:X54400; NID:956353; PIDN:CAA38266.1; PID:94539554
C;Complex: disulfide-bonded heterodimer of chains derived from the same pr precursor

A;Description: stimulates mitosis of hepatocytes and other cells
A;Note: does not have proteinase activity
C;Superfamily: hepatocyte growth factor/macrophage stimulating protein 1; kringle homolo
C;Keywords: alternative splicing; glycoprotein; growth factor; heterodimer; kringle; pyr
F;1-32/Domain: signal sequence #status predicted <SIGF;5-495/Product: hepatocyte growth factor #status predicted <MATF;56-495/Domain: kringle homology <KR1F;129-207/Domain: kringle homology <KR2F;130-384/Domain: kringle homology <KR2F;305-384/Domain: kringle homology <KR3F;392-470/Domain: kringle homology <KR4F;496-719/Domain: kringle homology <KR4F;496-728/Domain: kringle homology <KR4F;496-728/Domain: trypsin homology <KR4F;496-719/Domain: trypsin homology <KR4F;33/Modified site: pyrrolidone carboxylic acid (Gln) (in mature form) #status predicted
F;495,403,569,656/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;488-607/Disulfide bonds: #status predicted

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A;Cross-reterences: GB:S77422; NID:g998932; PIDN:AAB34354.1; PID:g998933
A;Cross-reterences: GB:S77422; NID:g998932; PIDN:AB34354.1; PID:g998933
A;Cross-reterences: GB:S77422; NID:g998932; PIDN:AB34354.1; PID:g998933
A;Cross-reterences: GB:S77422; PIDN:AB34354.1; PID:g998933
A;Cross-reterences: GB:S77422; PIDN:AB34354.1; PID:g998933
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A;Cross-reterences: GB:S77422; PIDN:G998933; PIDN:AB34354.1; PID:g998933
A;Cross-reterences: GB:S77422; PIDN:G998933
A;Cross-reterences: GB:S774222; PIDN:G998933; PIDN:G998933; PIDN:G99933; PIDN:G99933; PIDN:G99933; 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    hepatocyte growth factor precursor - clawed frog N;Alternate names: hepapoietin A; scatter factor C;Species: Xenopus sp. (clawed frog) C;Date: 13-Sep-196 #sequence_revision 13-Sep-1996 #text C;Accession: I51283 K;Accession: I51283 K;Nakamura, H.; Tashiro, K.; Nakamura, T.; Shiokawa, K. Mech. Dev. 49, 123-131, 1995 A;Ritle: Molecular cloning of Xenopus HGF cDNA and its A;Reference number: I51283; MUID:95267690; pMID:7748783 A;Accession: I51283
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A;Title: A role for HGF/SF in neural induction and its A;Reference number: I51285; MUID:95237013; PMID:7720585
A;Accession: I51285
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4; Mismatches 68;
                                                                                                                                                                                                                                                                                           Score 1737.5; DB 2,
Pred. No. 1.3e-115;
7; Mismatches 45;
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A;Cross-references: UNIPROT:Q90978; GB:S77480; NID:g998675; PID:g998676 C;Superfamily: hepatocyte growth factor/macrophage stimulating protein: F;124-197/Domain: kringle homology <KRGs F;202-279/Domain: kringle homology <KR2> F;296-374/Domain: kringle homology <KR3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GNGKNYMGNLSQTRSGLTCSMMDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPWCY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CNGESYRGIMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWCYT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SMIPHEHSFLPSSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVECMT
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                                                                                                            KRRNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDKAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PHEHDMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSHGQDCYR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KRCHWESENTMSAGIKDKYDISFDLYEKKDYIRDCIHGKGSNYRGTRNVTKRGLACQPWN
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                  KQCLWFPPNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQPWS
                                                                           KRRNPLHDYKKTGELMLIKVNKTLEVKTKLLNTTEQCAKRCSRNKGLSFTCKAFAYDRVT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GNGSTYKGTLSRTRFRLPCSMWEKNLQDLKRHTFNEPDVSILQKNYCRNPDNDAHGPWCY
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A;Gene: GDB:MSTI; D3F15S2; DNF15S2; HGFL
A;Gene: GDB:MSTI; D3F15S2; DNF15S2; HGFL
A;Cross-references: GDB:128833; OMIM:142408
A;Arp position: 3p21-3p21.3
C;Complex: disulfide-bonded heterodimer of chains derived from the same precursor
C;Complex: disulfide-bonded heterodimer of chains derived from the same precursor
C;Complex: disulfide-bonded heterodimer of chains derived from the same precursor
C;Complex: disulfide-bonded heterodimer of chains derived from the same precursor
C;Complex: disulfide-bonded heterodimer of chain factor; kringle; plasma
F;1-18/Domain: signal sequence #status predicted cSIG>
F;19-483/Domain: signal sequence #status predicted cACH>
F;19-483/Domain: kringle homology cRR2>
F;10-186/Domain: kringle homology cRR2>
F;283-361/Domain: kringle homology cRR3>
F;370-448/Domain: kringle homology cRR3>
F;3484-704/Domain: kringle homology cRR3>
F;484-704/Domain: beta chain #status predicted cBCH>
F;484-704/Domain: trypsin homology cRR3-
F;56-78,60-66,110-186,131-169,157-181,191-268,212-251,240-263,283-361,304-343,332-355,37
F;72,296,615/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             macrophage-stimulating protein 1 precursor - human
C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Date: 03-May-1994 #sequence_revision 14-Nov-1997 #text_change 09-Jul-2004
C;Accession: A4031; B4031; A47115; A61395
R;Han, S.; Stuart, L.A.; Degen, S.J.F.
Biochemistry 30, 9768-9780, 1991
A;Title: Characterization of the DNF1552 locus on human chromosome 3: identification
A;Title: Characterization of the DNF1552 locus on human chromosome 3: identification
A;Title: Characterization Display (MID:92002016; PMID:1655021)
A;Accession: A40331; MUID:92002016; PMID:1655021
A;Accession: A40331; MUID:92002016; PMID:1655021
A;Accession: B40331
A;Molecule type: mRNA
A;Residues: 1-711 <HA2>
A;Cross-references: GB:M74178; NID:9183976; PIDN:AAA50165.1; PID:9183977
A;Cross-references: GB:M1194; NID:93340141; PMID:8393443
A;Accession: A47136
A;Accession: A47136; MUID:93340141; PMID:8393443
A;Accession: A47136; MUID:93340141; PMID:8393443
A;Accession: A67136; MUID:93340141; PMID:8393443
A;Accession: A67189; MUID:917635; PMID:1827141
A;Accession: A67189; MUID:917635; PMID:1827141
A;Accession: A67189; MUID:917635; PMID:1827141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Accession: A61395
A;Molecule type: protein
A;Residues: 230-247;288-291,'E',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
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Matches 197
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                                45.3%;
         62;
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   Score 1180.5; DB 1;
Pred. No. 5.6e-76;
2; Mismatches 148;
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C;Date: 31-
C;Accession
R;Ohshiro,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: UNIPROT:P70521; EMBL:X95096; NID:g1669718; PIDN:CAA64473.1; PII C;Complex: disulfide-bonded heterodimer of chains derived from the same precursor C;Superfamily: hapatocyte growth factor/macrophage stimulating protein 1; kringle c;Keywords: duplication; glycoprotein; growth factor; kringle p;1-31/Domain: signal sequence #status predicted <SIG> F;1-32-488 49-716/Product: macrophage-stimulating protein 1 #status predicted <ACT> F;32-489/Domain: macrophage-stimulating protein 1 alpha chain #status predicted <ACT> F;110-186/Domain: kringle homology <KRI1> F;191-268/Domain: kringle homology <KRI2> F;192-370/Domain: kringle homology <KRI3> F;192-370/Domain: kringle homology <KRI3> F;197-487/Domain: kringle homology <KRI3> F;197-487/Domain: kringle homology <KRI4> F;10-786/Domain: kringle homology <KRI4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R;Ohshiro, K.; Iwama, A.; Matsuno, K.; Ezaki, T.; Sakamot Biochem. Biophys. Res. Commun. 227, 273-280, 1996
A;Title: Molecular cloning of rat macrophage-stimulating A;Reference number: JC5061, MUID:97011126; PMID:8858136
A;Accession: JC5061
A;Molecule type: mRNA
A;Residues: 1-716 < OHS>
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C;Species: Rattus norvegicus (Norway rat)
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                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
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                                                           EGGPWCFTSNPEVRYEVCDIPOCSEVECMTCNGESYRGLMDHTESGKICORWDHOTPHRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WCFTTDPNIRVGYCSQIPNC-DMSHGQDCYRGNGKNYMGNLSQTRSGLTCSMWDKNMEDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SCFRGKGEGYRGTANTTTAGVPCQRWDAQIPHQHRFTPEKYACKDLRENFCRNPDGSEAP
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      PRGPWCYTTNRSVRFQSCGIKSCREAVCVWCNGEDYRGEVDVTESGRECQRWDLQHPHSH
                                                                                                                             YVRTCIMDNGASYRGTVARTADGLPCQAWSRRFPNDHKYTPTPKNG--LEENFCRNPDGD
                                                                                                                                                                                        YIRNCIIGKGRSYKGTVSITKSGIKCQPWSSMIPHEHSFLPSSYRGKDLQENYCRNPRGE
                                                                                                                                                                                                                                                          VADAEECARRC---
                                                                                                                                                                                                                                                                                                               VNTADQCANRCTRNKGLPFTCKAFVFDKARKQCLWFPFNSMSSGVKKEFGHEFDLYENKD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PQFTFTSEPHAQLEENFCRNPDGDSHGPWCYTMDPRTPFDYCALRRCADDQPPSIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ECIQGQGEGYRGTVNTIWNGIPCQRWDSQYPHEHDMTPENFKCKDLRENYCRNPDGSESP
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                                                                                                                                                                                                                                                                                                                                                                                                           43.9%;
                                                                                                                                                                                                                                                       -GPLLDCRAFHYNMSSHGCQLLPWTQHSLRAQLHHSSLCDLFQKKD
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                                                                                                                                                                                                                                                                                                                                                                                 70;
                                                                                                                                                                                                                                                                                                                                                                                                              Score 1144; DB 1;
Pred. No. 2.1e-73;
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F;1-31/Domain: signal sequence #status predicted <SIG>
F;19-488,489-716/Product: macrophage-stimulating protein 1 #status experimental <MAT>
F;19-483/Domain: alpha chain #status experimental <ACH>
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C; Complex: disulf
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F;110-186/Domain: kringle homology <KR1>F;111-268/Domain: kringle homology <KR2>F;292-370/Domain: kringle homology <KR3>F;379-457/Domain: kringle homology <KR4>
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A; Residues: 1-18,'P',20-716 < DEG2 >
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A; Residues: 1-716 < DEG>
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                                                                                                                                                 YIRNCIIGKGRSYKGTVSITKSGIKCQPWSSMIPHEHSFLPSSYRGKDLQENYCRNPRGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    --SSETPHKPQFTPTSAPHAGLEANFCRNPDGDSHGPWCYTLDPETLFDYCALKRCDDDQ
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     PRGPWCYTTNRSVRFQSCGIKTCREAVCVLCNGEDYRGEVDVTESGRECQRWDLQHPHSH
                                                    EGGPWCFTSNPEVRYEVCDIPQCSEVECMTCNGESYRGLMDHTESGKICQRWDHQTPHRH
                                                                                                                                                                                                                       VADAEECARRC----GPLLDCRAFHYNMSSHGCQLLPWTQHSLHTQLYHSSLCHLFQKKD
                                                                                                                                                                                                                                                                              VNTADQCANRCTRNKGLPFTCKAFVFDKARKQCLWFPFNSMSSGVKKEFGHEFDLYENKD
                                                                                                                                                                                                                                                                                                                                        Conservative
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                                                                                                                                                                                                                                                                                                                                                             43.2%;
                                                                                                                                                                                                                                                                                                                                        69;
                                                                                                                                                                                                                                                                                                                                     Score 1125; DB 1; Length 716;
Pred. No. 4.7e-72;
9; Mismatches 143; Indels 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       (Asn) (covalent) #status
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                                                                                                              LEENFCRNPDGD
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                                                                                                                                                                                                                                                                A; Pathway: fibrinolysis
C; Superfamily: plasmin; kringle homology; plasminogen-related C; Superfamily: plasmin; kringle homology; plasminogen-related C; Keywords: fibrinolysis; glycoprottein; hydrolase; kidney; kri F; 1-790/Product: plasminogen #status predicted <PRO>
F; 1-77/Domain: plasminogen-related protein precursor homology F; 1-77/Domain: activation peptide #status predicted <APT>
F; 1-77/Domain: activation peptide #status predicted <ACH>
F; 1-77/Domain: chain A #status predicted <ACH>
F; 1-77/Domain: kringle homology <KR1>
F; 1-77/Domain: kringle homology <KR1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C;Species: Sus scrofa domestica (domestic pig)
C;Date: 07-Sep-1990 #sequence revision 01-Nov-1996 #text_change 09-Jul-2004
C;Accession: S03733; S03737; A25834
R;Schaller, J.; Marti, T.; Roesselet, S.J.; Kaempfer, U.; Rickli, E.E.
Fibrinolysis 1, 91-102, 1987
A;Title: Amino acid sequence of the heavy chain of porcine plasmin. Comparis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: UNIPROT:P06867
R;Brunisholz, R.A.; Lerch, P.G.; Schaller, J.; Rickli, E.E.; Lergier, W.; Manneberg, M. Eur. J. Biochem. 114, 465-470, 1981
A;Title: Comparison of the primary structure of the N-terminal CNBr fragments of human, A;Reference number: S03735; MUID:81212097; PMID:7238497
A;Accession: S03737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Molecule type: protein
A;Residues: 1-57 <BRUJ
R;Marri, T., Schaller, J.; Rickli, E.E.
Eur. J. Biochem. 149, 279-285, 1985
Eyr. J. Biochem. 149, 279-285, 1985
A;Title: Determination of the complete amino-acid sequence
A;Reference number: A25834; MUID:85203907; PMID:3846533
A;Accession: A25834
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                                                 F;166-243/Domain: kringle homology <KR2>
F;256-333/Domain: kringle homology <KR3>
F;358-435/Domain: kringle homology <KR4>
F;358-435/Domain: kringle homology <KR4>
F;450-790/Product: miniplasminogen #status experimental <MIN>
F;461-540/Domain: kringle homology <KR5>
F;561-790/Product: pismin chain B #status experimental <BCH>
F;561-783/Domain: trypsin homology <TRY>
F;30-54,34-42,84-162,105-145,133-157,166-243,169-297,187-226,215-238,256-333,277-316,305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ns the walls of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: protein A; Residues: 450-790 < MAR >
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Residues: 1-560 <SCH>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          plasmin (EC 3.4.21.7) precursor - N;Alternate names: plasminogen
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C; Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: protein
  F;602,645,740/Active site: His,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the graafian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        fibrin of blood clots; acts as a proteolytic factor in a va follicle; also activates the urokinase-type plasminogen act
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A;Description: dissolves the fibrin of blood clots; acts as a proteolytic ns the walls of the graafian follicle; also activates the urokinase-type p A;Pathway: fibrinolysis C;Superfamily: plasmin: Princip Learn
                                                                                                     C;Comment: Plasminogen is synthesized by the kidney and is present in plasma and many C;Comment: Plasminogen is converted into plasmin by plasminogen activators, both plasm mediately after dissociation from the clot. In the presence of the inhibitor, the activation involves also removal of the activation peptide. C;Comment: Stromelysin 1 (see PIR:KCMSS1) acts on plasminogen to produce angiostatin. eful in treating solid tumors.
                                                                                                                                                                                                                                                                                                                                                                                                         A;Cross-references: UNIPROT:P20918; GB:J0:R;Lijnen, H.R.; van Hoef, B.; Beelen, V.; Bur. J. Biochem. 224, 863-871, 1994
                                                                 eful in treating C; Function: A; Description: d
                                                                                                                                                                                                                                                                                                                                             A;Title: Characterization of the murine plasma fibrinolytic A;Reference number: S48202; MUID:95010076; PMID:7523120 A;Accession: S48202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Title: Characterization of the cDNA coding for mouse A; Reference number: A38514; MUID:91184812; PMID:2081600 A; Accession: A38514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       plasmin (EC 3.4.21.7) precursor - mouse N;Contains: angiostatin; plasminogen C;Species: Mus musculus (house mouse) C;Date: 20-Sep-1991 #sequence_revision 01-Nov-1996 #text_change C;Accession: A38514; S48202; S48203 R;Degen S .U.F.; Bell, S.M.; Schaefer, L.A.; Elliott, R.W. Genomics 8, 49-61, 1990
                                                                                                                                                                                                                                                                              A; Molecule type: protein A; Residues: 20-25 <LIU>A; Accession: S48203
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A; Residues: 22-27 <LI2>
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44.6%; Pred. No. 7
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7.8e-68;
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  precursor
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C; Keywords: day______ C; Keywords: day_____ F;1-96/Domain: plasminogen-release.
F;1-19/Domain: signal sequence #status predicted <PRO> F;20-812/Product: plasminogen #status predicted <PRO> F;20-96/Domain: activation peptide #status predicted <AST> F;79-466/Product: angiostatin #status predicted <AST> r:47-581,582-812/Product: plasmin #status predicted <ACH>
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F;97-581/Domain: kringle homology <KR1>
F;103-181/Domain: kringle homology <KR2>
F;185-262/Domain: kringle homology <KR3>
F;275-352/Domain: kringle homology <KR4>
F;481-560/Domain: kringle homology <KR4>
F;481-560/Domain: kringle homology <KR5>
F;582-812/Domain: kringle homology <KR5>
F;582-812/Domain: kringle homology <KR5>
F;582-812/Domain: trypsin homology <KR5>
F;582-805/Domain: trypsin homology <KR5>
F;582-805/Domain: trypsin homology <KR5>
F;49-73,53-61,103-181,124-164,152-176,185-262,188-316,206-245,234-257,275-352,296-335,
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Best Local S
Matches 191
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SVRWEYCNLKRC-SETGGSVV
                                       LIPWDYCPISRCEGDTTPTIV
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                                                                                         GTSSTTITGKKCQSWAAMFP--HRHSKTPENFPDAG-LEMNYCRNPDGD-KGPWCYTTDP
                                                                                                                                      GNLSQTRSGLTCSMWDKNMEDLHRHIFWE---PDASKLNENYCRNPDDDAHGPWCYTGNP
                                                                                                                                                                                        DGETAPWCYTTDSQLRWEYC-EIPSCESSASPDQSDSSVPPEEQTPVVQECYQSDGQSYR
                                                                                                                                                                                                                                     DGSESPWCFTTDPNIRVGYCSQIPNCDMSHG-----
                                                                                                                                                                                                                                                                                       PPSPTYQCLKGRGENYRGTVSVTVSGKTCQRWSEQTPHRHNRTPENFPCKNLEENYCRNP
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Pred. No. 2.5e-67;
7; Mismatches 145,
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plasmin (EC 3.4.21.7) precursor - western European hedgehog C;Species: Erinaceus europaeus (western European hedgehog) C;Date: 21-Feb-1997 #sequence_revision 21-Feb-1997 #text_change C;Accession: I46260
R;Lawn, R.M.; Boonmark, N.W.; Schwartz, K.; Lindahl, G.E.; Wade, J. Biol. Chem. 270, 24004-24009, 1995
A;Title: The recurring evolution of Lp(a): Insights from cloning A;Reference number: I46259; MUID:96025778; PMID:7592597
A;Accession: I46260
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA

Insights from cloning PMID:7592597

of hedgehog D.P.;

apolipopro . Fon

Byrne,

09-Jul-2004

I46260

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RESULT 12
B30848
B30848
C;Species: Macaca mulatta (rhesus macaque)
C;Species: Macaca mulatta (rhesus macaque)
C;Date: 31-Mar-1989 #sequence_revision 31-Mar-1989 #text_change
C;Accession: B32869; B30848
R;Tomlinson, J.E.; McLean, J.W.; Lawn, R.M.
J.Biol. Chem. 264, 5957-5965, 1989
A;Title: Rhesus monkey apolipoprotein(a). Sequence, evolution,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Residues: 1-810 <LAW>
A;Cross-references: UNIFROT:029485; EMBL:U33171; NID:g1046360; PID:g C;Superfamily: plasmin; kringle homology; plasminogen-related protein C;Keywords: hydrolase; serine proteinase F;1-96/Domain: plasminogen-related protein precursor homology <PLPH>F;103-181/Domain: kringle homology <KR1>F;103-181/Domain: kringle homology <KR3>F;275-552/Domain: kringle homology <KR3>F;379-456/Domain: kringle homology <KR4>
                                                                                                      A;Cross-references: UNIPROT:P12545; GB:J04697; NID:g342272; PIDN:AAA36901.1; PID:g34227: C;Superfamily: plasmin; kringle homology; plasminogen-related protein precursor homolog; G;Keywords: fibrinolysis; glycoprotein; hydrolase; kringle; serine proteinase F;1-96/Domain: plasminogen-related protein precursor homology <PLPH>
F;1-9/Domain: signal sequence #status predicted <SIG>
F;1-9/Domain: signal sequence #status predicted <SIG>
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                         F;275-352/Domain:
F;377-454/Domain:
                                                                  F;103-181/Domain: kringle homology <KR1>F;185-262/Domain: kringle homology <KR2>
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                                                                                                                ;Superfamily: plasmin; kringle homology; plasminogen-related protein precursor homology; Keywords: fibrinolysis; glycoprotein; hydrolase; kringle; serine proteinase; Reywords: fibrinolysis; glycoprotein; hydrolase; kringle; serine proteinase; plasminogen-related protein precursor homology <PLPH>
;1-9/Domain: signal sequence #status predicted <SIG>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NPDGEPAPWCFTTNSSVRWEFC-KIPDCVSSASETEHSDAPVIVPPEQTPVVQECYQGNG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VPLE--TTECIQGQGEGYRGTVNTIWNGIPCQRWDSQYPHEHDMTPENFKCKDLRENYCR
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kringle homology <KR4>
kringle homology <KR5>
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Pred. No. 6.1e
53; Mismatches
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plasmin (EC 3.4.21.7) precursor [validated] - human N;Alternate names: plasminogen precursor [misnomer] N;Contains: angiostatin; microplasmin; plasminogen C;Species: Homo saplens (man) C;Species: Homo saplens (man) C;Date: 24-Apr-1984 #sequence revision 02-Dec-1994 #text change 09-Jul-2004 C;Accession: A35229; I52242; A26646; I62738; I84609; S03735; A00929; A04627; R;Petersen, T.E.; Martzen, M.R.; Ichinose, A.; Davie, E.W. J. Biol. Chem. 265, 6104-611, 1990 A;Title: Characterization of the gene for human plasminogen, a key proenzyme A;Accession: A35229; MUID:90202879; PMID:2318848
                A;Molecule type: DNA
A;Residues: 1-810 <PET>
A;Residues: 1-810 <PET>
A;Residues: 1-810 <PET>
A;Residues: 1-810 <PET>
A;Cross-references: UNIPROT:P00747; UNIPROT:Q9UBQ9; UNIPROT:Q9UMIZ
A;Experimental source: leukocyte; lung fibroblast
R;Malgaretti, N.; Bruno, L.; Pontoglio, M.; Candiani, G.; Meroni,
Biochem. Biophys. Res. Commun. 173, 1013-1018, 1990
A;Title: Definition of the transcription initiation site of human
A;Reference number: I52242; MUID:91097523; PMID:2268308
A;Accession: I52242
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F;49-73,53-61,103-181,124-164,152-176,185-262,188-316,206-245,234-257,275-352,296-335,32
bonds: #status predicted
F;622,665,760/Active site: His, Asp, Ser #status predicted
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A;Status: translated from GB/EMBL/DDBJ
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42.6%;
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Pred. No. 2.6e-66;
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A;Title: Molecular cloning and characterization of a full-length cDNA clone A;Reference number: A26646; MUID:87162490; PMID:3030813

A;Cross-references: GB:M62890; NID:g190092; R;Forsgren, M.; Raden, B.; Israelsson, M.; FEBS Lett. 213, 254-260, 1987

Larsson,

PIDN:AAA36454.1; PID:g553613 Jarsson, K.; Heden, L.O.

for

human

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A; Molecule type: DNA A; Residues: 1-16 < MAL1>

s.G.

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A;Contents: annotation; active site
R;Trexler, M.; Vali, Z.; Patthy, L.
J. Biol. Chem. 257, 7401-7406, 1982
A;Title: Structure of the omega-aminocarboxylic acid-binding sites of hu
A;Reference number: A92382; MUID:82213905; PMID:6919539
A;Contents: annotation; omega-aminocarboxylic acid binding sites
R;Vali, Z.; Patthy, L.
J. Biol. Chem. 259, 13690-13694, 1984
A;Title: The fibrin-binding site of human plasminogen. Arginines 32 and
A;Reference number: A92488; MUID:85054794; PMID:6094526
A;Contents: annotation; fibrin binding site; omega-aminocarboxylic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Molecule type: protein
A;Residues: 483-507,'E',509-604 <WI3>
R;Robbins, K.C.; Bernabe, P.; Arzadon, L.; Summaria, L.
J. Biol. Chem. 248, 1631-1633, 1973
A;Title: The primary structure of human plasminogen. II.
A;Reference number: A92125; MUID:73149248; PMID:4694729
                                                                                                                                                                                                                                                                                                                                                                      A;Contents: annotation; active site R;Groskopf, W.R.; Summaria, L.; Robl J. Biol. Chem. 244, 3590-3597, 1969
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R;BrunishOlz, R.A.; Lerch, P.G.; Schaller, J.; Rickli, E.E.; Lergier, W.; Manneberg, M. Eur. J. Biochem. 114, 465-470, 1981
Eur. J. Biochem. 114, 465-470, 1981
A;Title: Comparison of the primary structure of the N-terminal CNBr fragments of human, A;Reference number: S03735; MUID:81212097; PMID:7238497
                                                                                                                                                                                                                                                                                                              A;Title: Studies on the active center of human plasmin. A;Reference number: A92048; MUID:69234739; PMID:4240117
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R;Sottrup-Jensen, L.; Petersen, T.E.; submitted to the Atlas, July 1977
A;Reference number: A00929
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A; Residues: 367-419 < MAL3 >
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A;Residues: 20-71,'E',73-85,87-106,'D',108-360,'E',362-810
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Cross references: GB:X05199; NID:g35530; PIDN:CAA28831.1;
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R;Rejante, M.R.; Llinas, M.
Bur. J. Blochem. 221, 927-937, 1994
A;Title: (1)H-NMR assignments and secondary structure of human plasminogen kringle 1.
A;Reference number: $43645; MUID:94237157; PMID:8181475
A;Contents: annotation; conformation by (1)H-NMR, residues 96-184
A;Rejante, M.R.; Llinas, M.
Eur. J. Blochem. 221, 939-949, 1994
A;Title: Solution structure of the epsilon-aminohexanoic acid complex of human plasmin A;Reference number: A58817; MUID:94237158; PMID:8181476
A;Reference number: A58817; MUID:94237158; PMID:8181476
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R;de Vos, A.M.; Ultsch, M.H.; Kelley, R.F.; Padmanabhan, K.;
Biochemistry 31, 270-279, 1992
A;Title: Crystal structure of the kringle 2 domain of tissue
A;Reference number: A39483; MUID:92118803; PMID:1310033
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A;Contents: annotation; conformation by (1)H-NMRC;Comment: Plasminogen is synthesized by the kidtC;Comment: Plasminogen is converted to plasmin by
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A,Title: Kringle domains of human angiostatin.
A,Reference number: A58811, MUID:97067211; PMI
A,Contents: annotation
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A;Contents: annotation; X-ray crystallography,
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A;Description: dissolves the fibrin of blood clots; acts as a proteoly no the walls of the graafian follicle; also activates the urokinase-ty A;Pathway: fibrinolysis
A;Pathway: fibrinolysis
C;Superfamily: plasmin; kringle homology; plasminogen-related protein C;Keywords: angiogenesis inhibitor; blood; duplication; fibrinolysis; F;1-96/Domain: plasminogen-related protein precursor homology <PLPH>F;1-96/Domain: signal sequence #status predicted <SIG>F;1-196/Domain: signal sequence #status predicted <SIG<F;1-196/Domain: signal sequence #status predicted <SIG
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F;103-181/Domain: kringle homology <KR1>
F;185-262/Domain: kringle homology <KR2>
F;275-352/Domain: kringle homology <KR3>
F;377-454/Domain: kringle homology <KR4>
F;481-560/Domain: kringle homology <KR4>
F;481-560/Domain: kringle homology <KR5>
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                                plasmin (EC 3.4.21.7) precursor - N;Alternate names: plasminogen
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C;Species: Bos
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                                                                                                                                                                                                                                                DPSVRWEYCNLKKCSG-TEASVV
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(cattle)
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F;27-137Domain: activation peptide #status experimental <APT>
F;104-583,584-812/Product: plasmin #status experimental <AMT>
F;104-583/Domain: plasmin chain A #status experimental <ACH>
F;101-188/Domain: kringle homology <KR1>
F;192-269/Domain: kringle homology <KR2>
F;282-359/Domain: kringle homology <KR3>
F;384-461/Domain: kringle homology <KR4>
F;384-61/Domain: kringle homology <KR4>
F;384-564/Domain: kringle homology <KR4>
F;384-81/Domain: kringle homology <KR4>
F;384-812/Domain: kringle homology <KR5>
F;485-564/Domain: kringle homology <KR5>
F;584-812/Domain: blasmin chain B #status experimental <BCH>
F;584-805/Domain: trypsin homology <TRY>
F;584-805/Domain: trypsin homology <TRY
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A;Residues: 706-743, "R', 745-812 <MAL>
A;Residues: 706-743, "R', 745-812 <MAL>
A;Residues: 706-743, "R', 745-812 <AMID: g163551; PIDN: AAA30714.1; PID: g163552
A;Brunisholz, R.A.; Lerch, P.G.; Schaller, J.; Rickli, E.E.; Lergier, W.; Mann
Eur. J. Biochem. 114, 465-470, 1981
A;Title: Comparison of the primary structure of the N-terminal CNBr fragments
A;Reference number: S03735; MUID: 81212097; PMID: 7238497
A;Accession: S03736
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A;Note: it is uncertain whether Met-1 or Met-8
R;Schaller, J.; Moser, P.W.; Dannegger-Muller,
Eur. J. Biochem. 149, 267-278, 1985
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A; Accession: S45046
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C;Accession: S45046; A25835; T45961; S03736
R;Berglund, L.; Andersen, M.D.; Petersen, T.
submitted to the EMBL Data Library, May 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Superfamily: plasmin; kringle homology; plasminogen-related p
C;Keywords: duplication; fibrinolysis; glycoprotein; hydrolase;
F;1-26/Domain: signal sequence #status predicted <SIG>
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A; Residues: 27-334,'D',336-515,'H',517-554,'L'
A; Residues: 27-334,'D',336-515,'H',517-554,'L'
R; Malinowski, D.P.; Sadler, J.E.; Davie, E.W.
Biochemistry 23, 4243-4250, 1984
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FDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQPWSSMIPHEHSFLPSSYRGKDLQEN 144
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427 LIPWDYCPISRCEGDTTPT 445 : :	370 GNLSQTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDDAHGPWCYTGNP 426 : : :	318 LRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSHGQD-CYRGNGKNYM 369	258 ADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDSQYPHEHDMTPENFKCKD 317 ::: ::: ::: ::	198 GKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWCYTLDPHTRWEYCAIKTC 257 :	149 PRGEEGGPWCFTSNPEVRYEVCDIPQCSEVECMTCNGESYRGLMDHTES 197	89 ENKDYIRNCIIGKGRSYKGTVSITKSGIKCQPWSSMIPHEHSFLPSSYRGKDLQENYCRN 148 : : : ::	y Match 36.2%; Score 943.5; DB 2; Length 2869; Local Similarity 45.6%; Pred. No. 1.4e-58; nes 173; Conservative 51; Mismatches 126; Indels 29; Gaps 10;	le type: mRNA 58: 1-2869 <lam> references: UNIPROT:Q28398; EMBL:U33170 mental source: liver : The lipoprotein Lp(a), a major inher ipoprotein(a).</lam>	R.M.; Boonmark, N.W.; Schwartz, K.; Lindahl, G.E.; Wade, D.P.; Byrne, C.D.; Fong Chem. 270, 24004-24009, 1995 :: The recurring evolution of Lp(a): Insights from cloning of hedgehog apolipoprotence number: 146259; MUID:96025778; PMID:7592597 sion: T18518 sion: T18518 preliminary; translated from GB/EMBL/DDBJ	s cotein(a) - western European hedgehog (fragment) s: Erinaceus europaeus (western European hedgehog) L5-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 09-Jul-2004 ion: T18518	: : :: :: 46 TTDPRVRWEFCNLKKC 4	423 TGNPLIPWDYCPISRC 438	366 KNYMGNLSQTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPWCY 422	GEKAPWCYTTNSE	PWCFTTDPNIRVGYCSQI	71 TPPPSSGPKYQCLKGTGKNYGGTVAVTESGHTCQRWSEQTPHKHNRTPENFPCKNLEENY 33	65 TDVPLETTECIOGOGEGYRGTVNTIWNGIPCORWDSOYPHEHDMTPENFKCKDLRENY 32	205 UHQITEHRHAKI PEKKI PUKGKUDUN YEKNE DIGQER PROTIL DEHTRWEYCA IKITCA DITIMUD 264	: : : : :

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MEDLINE=91025062; PubMed=2145836;

Seki T., Ihara I., Sugimura A., Shimonishi M., Nishizawa Hagiya M., Nakamura T., Shimizu S.;

TISOlation and expression of cDNA for different forms of growth factor from human leukocyte.";

Biochem. Biophys. Res. Commun. 172:321-327(1990).
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01-JAN-1991 (Rel. 19, Last sequence update)  
25-OCT-2004 (Rel. 45, Last annotation update)
MEDLINE=91200041; PubMed=1826653;
Miyazawa K., Kitamura A., Naka D., Kitamura
"An alternatively processed mRNA generated f
growth factor gene.";
                                                                                   MEDLINE=90066676; PubMed=2531289; DO Nakamura T., Nishizawa T., Hagiya M. Sugimura A., Tashiro K., Shimizu S.; "Molecular cloning and expression of Nature 342:440-443(1989).
                                                                                                                                                                                                                                                                                                                                                                   "Molecular cloning and sequence analysis of cDNA growth factor.";
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MEDLINE=91340155; Pubmed=1831432; DOI=10.1016/0378-1119(91)90080-U;
Seki T., Hagiya M., Shimonishi M., Nakamura T., Shimizu S.;
"Organization of the human hepatocyte growth factor-encoding gene."
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
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Name=HGF; Synonyms=HPTA;
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                                                          SEQUENCE FROM N.A. TISSUE=Placenta;
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                                                                                                                                                                                                                                                                                                                                                        Biochem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            SSUE=Placenta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         102:213-219(1991).
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                                                                                                                                           DOI=10.1038/342440a0;
M., Seki T., Shimonishi
                                                                                                                 of human hepatocyte
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Sakiyama O
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Takahashi K.,
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RP SEQUENCE FROM N.A.

RX MEDLINE=22737999; PubMed=12853948; DOI=10.1038/nature01782;

RA Hillier L.W., Fulton R.S., Fulton L.A., Graves T.A., Pepin K.H.,

RA Hillier L.W., Fulton R.S., Fulton L.A., Graves T.A., Pepin K.H.,

RA Wagner-McPherson C., Layman D., Maas J., Jaeger S., Walker R.,

RA Wylie K., Sekhon M., Becker M.C., O'Laughlin M.D., Schaller M.E.,

RA Wylie K., Sekhon M., Becker M.C., O'Laughlin M.D., Schaller M.E.,

RA Wylie K., Sekhon M., Becker M.C., O'Laughlin M.D., Schaller M.E.,

RA Wylie K., Sekhon M., Becker M.C., Mash W.E., Cordes M., Du H.,

RA Sun H., Edwards J., Bradshaw-Cordum H., Ali J., Andrews S., Isak A.,

RA Vanbrunt A., Nguyen C., Du F., Lamar B., Courtney L., Kalicki J.,

RA Vanbrunt A., Nguyen C., Du F., Lamar B., Courtney L., Kalicki J.,

RA Ozersky P., Bielicki L., Scott K., Holmes A., Harkins R., Harris A.,

RA Ozersky P., Bielicki L., Scott K., Holmes A., Harkins R., Harris A.,

RA Kozlowicz-Reilly A., Leonard S., Rohlfing T., Rock S.M.,

RA Kozlowicz-Reilly A., Leonard S., Rohlfing T., Rock S.M.,

RA Kozlowicz-Reilly A., Leonard S., Rohlfing T., Rock S.M.,

RA Kozlowicz-Reille P., Miller N., Johnson D., Murray J., Woessner J.P.,

RA Wendl M.C., Yang S.-P., Schultz B.R., Wahlis J.W., Spieth J.,

RA Hickenbotham M.T., Eldred J., Williams D., Bedell J.A., Mardis E.R.,

RA Gillett W., Zhou Y., James R., Phelps K., Iadanoto S., Bubb K.,
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                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. (ISOFORM 1), AND VARIANTS (I Rieder M.J., Livingston R.J., Daniels M.R., Poel Miyamoto K.E., Nguyen C.P., Nguyen D.A., Poel Schackwitz W.S., Sherwood J.K., Witrak L.A., N
                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=96278713; PubMed=8662798; DOI=10.1074/jbc.2 Cioce V., Csaky K.G., Chan A.M.-L., Bottaro D.P., T Jensen R., Aaronson S.A., Rubin J.S.; "Hepatocyte growth factor (HGF)/NK1 is a naturally HGF/scatter factor variant with partial agonist/ant J. Biol. Chem. 271:13110-13115(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    growth factor binds the c-Met but not mitogenesis.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chan A.M.-L.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PubMed=1824873;
                                                                                                                                                                                                                                                                                     "NIEHS-SNPs, environmental genome project, NIEHS ES15478, Department of Genome Sciences, Seattle, WA (URL: http://egp.gs.washington.edu)."; Submitted (FEB-2003) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=93087571;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Identification of a competitive HGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Evidence for the identity of human hepatocyte growth factor.";
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Hishida T., Daik
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el C.L., Robertson P.D.
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Riausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.

A Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunzaratne P.H.,

Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gay L.J., Hulyk S.W

A Hilalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

A Willalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Yullalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

A Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffeard G.G.,

A Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

A Blakesley R.W., Touchman J.W., Green E.D., Wyers R.M.,

A Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

"Generath A., Schein J.E., Jones S.J.M., Marra M.A.;

"Generation and initial analysis of more than 15,000 full-length hu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=91207365; PubMed=1826837; Yoshiyama Y., Arakaki N., Naka D., Yoshiyama H., Gohda E., Kitamura N., Hishida T., Daikuhara Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human hepatocyte growth factor gene."; Biochemistry 30:9170-9176(1991).
                                                                                                                                                                                                                                                                                                                                               "Hepatocyte growth factor is linked on the alpha chain.";
                                                                                                                                                                                                                                                                                                                                                                                 Shimizu N., Hara H., Sogabe T., Nakamura T., Shimizu S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Identification of the N-terminal native and recombinant human hepat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Miyazawa K., Kitamura A., Kitamura N., "Structural organization and the transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "The DNA sequence of human chromosome Nature 424:157-164(2003).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Baertsch R.A., Brent M.R., K
Bailey J.A., Portnoy M.E., T
Eddy S.R., McPherson J.D., O
Waterston R.H., Wilson R.K.;
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                                                                                                      Zhou
                                                                                                                                                                       "Structure-function analysis of hepatocyte growth factor: identification of variants that lack mitogenic activity yhigh affinity receptor binding."; EMBO J. 11:2503-2510(1992).
                                                                                                                                                                                                                                                                             MEDLINE=92331602;
                                                                                                                                                                                                                                                                                              MUTAGENESIS
                                                                                                                    MEDLINE=98154323;
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                             CTURE BY NMR OF 31-127.
INB-98154323; PubMed-9493272; DOI=10.10
H., Mazzulla M.J., Kaufman J.D., Stahl
n J.S., Bottaro D.P., Byrd R.A.;
solution structure of the N-terminal cor reveals a potential heparin-binding
cture 6:109-116(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA sequences.";
1. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Levy R.,
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PubMed=12477932; DOI=10.1073/pnas.242603899;
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M.R., Luis E.A.
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PubMed=1482348;
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Keibler E., Flicek P., Bork
Torrents D., Chinwalla A.T.
Olson M.V., Eichler E.E., G
 ANGSTROMS)
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n. 175:660-667(1991).
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D., Stahl S.J., Wingfield P.T.,
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, Tsubouchi H., Ishii
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MEDLINE=22844761; PubMed=12963274; DOI=10.1016/S0165-2427(03)00118-1;

Miyake M., Saze K., Yaguchi T., Wang J., Suzuta Y., Haga Y.,

Takahashi S.Y., Yamamoto Y., Iwabuchi S.;

"Canine hepatocyte growth factor: molecular cloning and characterization of the recombinant protein.";

Vet. Immunol. Immunopathol. 95:135-143(2003).
                                                                    Liao A.T., Chien M.B., London C.A.;
Submitted (FEB-2004) to the EMBL/GenBank/DDBJ d
-!- SIMILARITY: Belongs to peptidase family S1.
EMBL; AB90353; BAC57560.1; -.
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  MEROPS; S01.982;
GO; GO:0004263; 1
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Q76BS1
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Best Local S
Matches 416
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Pfam; PP00024; PAN; 1.

Pfam; PP00089; Trypsin; 1.

PIRSP PP00089; Trypsin; 1.

PIRSP; PIRSP001152; HGF MST1; 1.

PRINTS; PR000122; CHYMOTRYPSIN.

PRINTS; PR00018; KRINGLE.

PRODOM; PD000395; KRINGLE.

PRODOM; P0000395; KRINGLE.

PRODOM; SMO0130; KR; 4.

SMART; SM00130; KR; 4.

SMART; SM00020; Tryp_SPC; 1.

REMART; SM00020; Tryp_SPC; 1.

PROSITE; PS00070; KRINGLE 1; 4.

PROSITE; PS0070; KRINGLE 2; 4.

PROSITE; PS50074; PAN; 1.

PROSITE; PS50074; PAN; 1.

PROSITE; PS50074; TRYPSIN DOM; 1.
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GO; GO:0006508; P:proteolysis and peptidolysis; IE
InterPro; IPR011359; HGF MST1.
InterPro; IPR000001; Kxingle.
InterPro; IPR003014; PAN.
InterPro; IPR003609; Pan app.
InterPro; IPR003609; Pan app.
InterPro; IPR001254; Peptidase_S1.
InterPro; IPR001314; Peptidase_S1A.
InterPro; IPR009003; Pept Ser_Cys.
Pform. Procent; Vrincle.
                                                                       Q76BS1;
Q76BS1;
05-JUL-2004
05-JUL-2004
05-JUL-2004
                      Hepatocyte ;
Name=hgf;
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     taurus
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                                                                                                                                                                                                                                                                                                                                                                                                                          YRGNGKNYMGNLSQTRSGLTCSMWDKNMEDLHRHIFWEDDASKLNENYCRNPDDDAHGPW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QYPHQHDITPENFKCKDLRENYCRNPDGAESPWCFTTDPNIRVGYCSQIPKCDVSSGQDC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QYPHEHDMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSHGQDC
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                                                     factor
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Pred. No. 2.9e
L9; Mismatches
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                                                                            sequence update)
annotation updat
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120 151 180

240 271 300 331 331 360 391 420

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Yamaji D., Kimura K., Watanabe A., Makondo K., Sa Submitted (MAY-2003) to the EMBL/GenBank/DDBJ dat -: SIMILARITY: Belongs to peptidase family S1.

EMBL; AB110822; BAD02475.1; -.

HSSP; P08519; 1KIV.

GO; GO:0004263; F:chymotrypsin activity; IEA.

GO; GO:0008233; F:peptidase activity; IEA.

GO; GO:0008233; F:peptidase activity; IEA.

GO; GO:000823; F:trypsin activity; IEA.

GO; GO:0004295; F:trypsin activity; IEA.

GO; GO:0006508; P:proteolysis and peptidolysis; II

InterPro; IPR001359; HGF MST1.

InterPro; IPR003609; Pan_app.

InterPro; IPR003509; Pan_app.

InterPro; IPR001254; Peptidase_S1A.

InterPro; IPR003014; Peptidase_S1A.

InterPro; IPR003013; F:pt_Ser_Cys.
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Best Local (
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Pfam; PF00089; Trypsin; 1.

Pfam; PF00089; Trypsin; 1.

PIRSF; PIRSF001152; HGF MST1; 1.

PRINTS; PR000722; CHYMOTRYPSIN.

PRINTS; PR00018; KRINGLE.

ProDom; PD000395; Kringle; 4.

SMART; SM00130; KR; 4.

SMART; SM00073; PAN AP; 1.

SMART; SM00020; Tryp_SPc; 1.

PROSITE; PS00021; KRINGLE 1; 4.

PROSITE; PS50070; KRINGLE 2; 4.

PROSITE; PS50070; KRINGLE 2; 4.

PROSITE; PS50070; KRINGLE 2; 4.

PROSITE; PS50240; TRYPSIN_DOM; 1.

PROSITE; PS50240; TRYPSIN_DOM; 1.
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Bovinae, Bos.
NCBI_TaxID=9913;
[1]
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Mammalia; Eutheria;
                                                                                                                     361
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CYTGNPLIPWDYCPISRCEGDTTPTIV
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                                                                                                 YRGNGKNYMGNLSQTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGFW
                                                                                                                                                                    QYPHQHDITPENFKCKDLRENYCRNPDGAESPWCFTTDPNIRVGYCSQIPKCDVSSGQDC
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                                                                                                                                                                                                                                                                                               YTLDPHTRWEYCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDS
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                                                                     YRGNGKNYMGSLSKTRSGLTCSMWDKNMEDLHRHIFWEPDATKLNKNYCRNPDDDAHGPW
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92.6%; Pre
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 2456;
Pred. No. 8
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E39D653B0A85F49B CRC64;
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3.2e-176;
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databases.
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Best Local
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Interpro; IRR009003; Peptidase_S1.
Interpro; IRR009003; Peptidase_S1.
Interpro; IRR009003; Peptidase_S1.
Pfam; PF00051; Kringle; 4.
Pfam; PF00024; PAN; 1.
Pfam; PF00029; Trypsin; 1.
PIRSF; PIRSF001152; HGF MST1; 1.
PIRSF; PRO0722; CHYMOTRYPSIN.
PRINTS; PR00018; KRINGLE.
PRO0715; PR00018; KRINGLE.
PRO0715; PR000195; KRINGLE; 4.
SMART; SM00130; KR; 4.
SMART; SM00130; KR; 4.
SMART; SM00120; Tryp SPc; 1.
SMART; SM00020; Tryp SPc; 1.
PROSITE; PS00070; KRINGLE_1; 4.
PROSITE; PS00070; KRINGLE_2; 4.
PROSITE; PS50070; KRINGLE_2; 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (FEB-2002) to the EMBL/GenBank/DDBJ databases.
-[- SIMILARITY: Belongs to peptidase family S1.
EMBL; AB046610; BAB21499.1; --
EMBL; AB080107; BAC10545.1; --
EMBL; BO80107; BAC10545.1; --
HSSP; P14210; IGNN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q9BH09;
Q9BH09;
01-JUN-2001
01-JUN-2001
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InterPro;
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Submitted
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Carnivora; Fissipedia; Felidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HSSP; P14210; IGMN.

MEROPS; S01.982; -.

GO; GO:0004263; F:chymotrypsin activity; GO; GO:0008233; F:peptidase activity; IEA.

GO; GO:0006508; F:trypsin activity; IEA.

GO; GO:0006508; F:proteolysis and peptid.

InterPro; IPR011359; HGF_MST1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE=Liver;
Kobayashi Y., Nakamura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9685;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro;
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 121
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                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             j IPR000001; Kringle.
j IPR003014; PAN.
j IPR0030609; Pan_app.
j IPR001254; Peptidase S1.
j IPR001314; Peptidase S1A.
j IPR009003; Pept Ser Cys.
                                                                                                                               ERKRRNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDK
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                                    ARKRCLWFPFNSMTSGVKKEFGHEFDLYENKDYIRNCIIGKGGSYKGTVSITKSGIKCQP
                                                         ARKQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQP
WSSMIPHEHSFLPSSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVEC
                                                                                                          QKKRRNTLHEFKKSAKTTLI KEDPLLKI KTKKMNTADQCANRCI RNKGLPFTCKAFVFDK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (JUL-2000)
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                                                                                                                                                                                                                                                       Kringle; Protease; Serine 728 AA; 83067 MW; 8D7F4/
                                                                                                                                                                                    Conservative
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                                                                                                                                                                                   Score 2452; DB
Pred. No. 1.6e-1
1; Mismatches
                                                                                                                                                                                                                                                         Serine protease.
8D7F4A333D1E190A
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1.6e-175;
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                                                                        SEQUENCE FROM N.A.
STRAIN-C57BL/6J; TISSUE=Thymus;
STRAIN-C57BL/6J; TISSUE=Thymus;
MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., It
Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
"Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new ge
Genome Res. 10:1617-1630(2000).
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01-MAR-2003 (TrEMBLrel. 26, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Mus musculus 3 days neonate thymus cDNA, RIKEN full-length enriched
library, clone:A630060C16 product:hepatocyte growth factor, full
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nature [3]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Meth.
                                                                                                                                                                                                                                                                                                          the RIKEN Genome Exploration Research "Analysis of the mouse transcriptome be 60,770 full-length cDNAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Thymus;
The FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Thymus;
MEDLINE=21085660; PubMed=11217851;
RIKEN FANTOM Consortium;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Carninci P., Hayashizaki Y.; "High-efficiency full-length cDNA cloning Meth. Enzymol. 303:19-44(1999).
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STRAIN=C57BL/6J; TISSUE=Thymus;
MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
SEQUENCE FROM N. A
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Mammalia; Eutheria;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Functional annotation of a full-length Nature 409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (Mouse)
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Rodentia;
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Sciurognathi; Muridae;
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Matches 407
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(Carninci Programa K., Akimura T., Arakawa T., Bono H., Carninci R. Adachi J., Aizawa K., Akimura T., Hara A., Hashizume W., Fukuda S., Furuno M., Hanagaki T., Hara A., Hashizume W., Hayashida K., Hayatsu N., Hiramoto K., Hiraoka T., Hirozane T., Hayashida K., Hayatsu N., Hiramoto K., Hiraoka I., Kasukawa T., Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koy. Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koy. A. Kurihara C., Mateuyama T., Miyazaki A., Murata M., Nakamura M., Nishi K., Nomura K., Numazaki R., Ohno M., Ohsato N., Okazaki Y., A. Nishi K., Nomura K., Numazaki R., Ohno M., Ohsato N., Okazaki Y., A. Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H., Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tanaka T., A. Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tanaka T., A. Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y., Submitted (JUL-2001) to the EMBL/GenBank/DBBJ databases.

2. -- SIMILARITY: Belongs to peptidase family S1.

2. EMBL; AK042121; BAC31175.1; --

2. BR HSSP; P14210; 16KN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HSSP, PA1210; IGNN.

MGD; MG1:96079; Hgf.

GG0; GG0:0008283; P:cell proliferation; IDA.

GG0; GG0:000902; P:cellular morphogenesis; ID

InterPro; IPR0011359; HGF MST1.

InterPro; IPR000001; Kringle.

InterPro; IPR003014; PAN.

InterPro; IPR001254; Peptidase_S1A.

InterPro; IPR001314; Peptidase_S1A.

InterPro; IPR001014; Pan_app.

InterPro; IPR001014; Peptidase_S1A.

InterPro; IPR001014; Peptidase_S1A.

InterPro; IPR001016; Pan_app.

InterPro; IPR001016; Pan_app.

InterPro; IPR001016; Pan_app.

InterPro; IPR001016; Peptidase_S1A.

InterPro; IPR001016; Peptidase_S1A.

InterPro; IPR001016; Peptidase_S1A.
                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PRO0722; CHYMOTRYPSIN.
PRINTS; PRO0018; KRINGLE.
PRODOM; PD000395; Kringle; 4.
SMART; SM00130; KR; 4.
SMART; SM00130; Tryp_SPc; 1.
SMART; SM00473; PAN AP; 1.
SMART; SM00020; Tryp_SPc; 1.
PROSITE; PS00071; KRINGLE 1; 4.
PROSITE; PS50070; KRINGLE 2; 4.
PROSITE; PS50948; PAN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600; Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P., Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M., Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A., Yamamoto R., Matsumcto H., Sakaguchi S., Ikegami T., Kashiwagi K., Fujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M., Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J., Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.; "RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer."; Genome Res. 10:1757-1771(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00024; PAN; 1.
Pfam; PF00089; Trypsin; 1.
PIRSF; PIRSF001152; HGF_MST1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00051; Kringle;
                                          153
                                                                                  121
181
                                                                                                                                                                                                                                                                                                407;
                                                                                                                            93
                                                                                                                                                                    61
                                                                                                                                                                                                              33
                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                  ARKQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQP
                                                                                                                                                                                                                                      ERKRRNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDK
MTCNGESYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWC
                                            WNSMI PHEHSFI
                                                                           WSSMIPHEHSFLPSSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVEC
                                                                                                                            SRKRCYWYPFNSMSSGVKKGFGHEFDLYENKDYIRNCIIGKGGSYKGTVSITKSGIKCQP
                                                                                                                                                                                                                QKKRRNTLHEFKKSAKTTLTKEDPLLK1KTKKVNSADECANRC1RNRGFTFTCKAFVFDK
                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                    92.5%;
                                            LPSSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVEC
                                                                                                                                                                                                                                                                                                21;
                                                                                                                                                                                                                                                                                                                    Score 2409
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                  Serine protease.
8D5258DF3BCF3545 CRC64;
                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                  2409; DB 2;
No. 2.7e-172;
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                                                                                                                                                                                                                                                                                                  19;
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Okazaki Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tanaka
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                                                                                                                                                                                                                                                                                                0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q08048; Q61662; Q64007; 01-NOV-1995 (Rel. 32, Created) 01-NOV-1995 (Rel. 32, Last sequence update) 25-OCT-2004 (Rel. 45, Last annotation update) Hepatcoyte growth factor precursor (Scatter f. (Hepatopoeitin A).
                                                                                                                            Biochim. Biophys. Acta 1216:299-303(1993).

-!- FUNCTION: HGF is a potent mitogen for mature parenchymal
-thepatocyte cells, seems to be an hepatotrophic factor, and act
growth factor for a broad spectrum of tissues and cell types.
has no detectable protease activity.
-!- SUBUNIT; Dimer of an alpha chain and a beta chain linked by a
disulfide bond.
                                                                                                                                                                                                                                                           MEDLINE=94060105; PubMed=8241272; DOI=10.1016/0167-4781(93)90159-B; Liu Y., Michalopoulos G.K., Zarnegar R.;
                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=94363381; PubMed=8081873;
Lee C.C., Kozak C.A., Yamada K.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE=Mammary fibroblast;
MEDLINE=94183257; PubMed=8135822;
Sasaki M., Nishio M., Sasaki T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HGF MOUSE
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                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                            Lee C.C., Kozak C.A., Yamada K.M.;
"Structure, genetic mapping, and expression of the mouse Hgf/scatter
                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sasaki M., Nishio M., Sasaki T., Enami J.,
"Identification of mouse mammary fibroblast-derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                            factor as hepatocyte growth factor."
                                                                                                                                                                                                                             "Molecular cloning and characterization of cDNA encoding mouse hepatocyte growth factor.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EQUENCE FROM N.A.
                          IsoId=Q08048-2; Sequence=VSP_005408; SIMILARITY: Belongs to the peptidase $
                                                          Name=Short;
subfamily.
SIMILARITY:
                                                                                               Event=Alternative
                                                                                                                 ALTERNATIVE PRODUCTS
                                                                                                                                                                                                                                                                                                                                Adhes. Commun.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               333
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                                                                      IsoId=Q08048-1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YRGNGKNYMGNLSQTRSGLTCSMWDKVMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QYPHEHDMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSHGQDC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MTCNGESYRGPMDHTESGKTCQRWDQQTPHRHKFLPERYPDKGFDDNYCRNPDGKPRPWC
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Biophys.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CYTGNPLIPWDYCPISRCEGDTTPTIV 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QYPHKHDITPENFKCKDLRENYCRNPDGAESPWCFTTDPNIRVGYCSQIPKCDVSSGQDC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YTLDPHTRWEYCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
Contains 4 kringle domains
                                                                                                                                                                                                                                                                                                                                                                                                                                                Res. Commun. 199:772-779(1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (ISOFORMS
                                                                                                                                                                                                                                                                                                                                   1:101-111(1993).
                                                                      Sequence=Displayed;
                                                                                                 splicing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LONG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Craniata; Ver
Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                  Named isoforms=2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AND SHORT),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vertebrata; Euteleostomi;
thi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A
                             S1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       factor)
                            family.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mammary
                             Plasminogen
                                                                                                                                                                                        and acts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            growth
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Query Match
Best Local S
Matches 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF00051; Kringle; 4.

Pfam; PF00024; PAN; 1.

Pfam; PF00089; Trypsin; 1.

PISSF PIRSF001152; HGF MST1; 1.

PRINTS; PR00722; CHYMOTRYPSIN.

PRINTS; PR00018; KRINGLE.
                                                                                                                                                                                                                                                                                                                                                                            SMART; SM00130; KR; 4.

SMART; SM00473; PAN_AP; 1.

SMART; SM0020; TXYP_SPC; 1.

PROSITE; PS00021; KRINGLE_1; 4.

PROSITE; PS50070; KRINGLE_2; 4.

PROSITE; PS50048; PAN; 1.

PROSITE; PS50048; PAN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; D10212; BAA01064.1; -
EMBL; D10213; BAA01065.1; -
EMBL; S71816; AAB31855.1; -
EMBL; X72307; CAA51054.1; A
PIR; JC2117; A60185.
HSSP; P14210; 1BHT.
                                                 CONFLICT
CONFLICT
CONFLICT
SEQUENCE
                                                                                                                       CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                         DISULFID
DISULFID
DISULFID
CARBOHYD
                                                                                                                                                                                                                   DOMAIN
DOMAIN
DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                       CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR003609; Pan app.
InterPro; IPR009003; Pept Ser Cys.
InterPro; IPR001254; Peptidase_S1.
InterPro; IPR001314; Peptidase_S1A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                        MOD_RES
                                                                                                                                                                                                                                                                                                                                         Alternative splicing; Direct protein sequencing; Glyo
Growth factor; Kringle; Pyrrolidone carboxylic acid;
Serine protease homolog; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ProDom;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MGD; MGI:96079; Hgf.
GO; GO:00008283; P:cell proliferation; IDA.
GO; GO:0000902; P:cellular morphogenesis; IDA.
                                                                                                            VARSPLIC
                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                    CHAIN
                                                                                                                                                                                                                                                                                                                               SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR000001; Kringle.
InterPro; IPR003014; PAN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEROPS;

    !- SIMILARITY: Contains 1 PAN domain.

   407;
                                                                                                                                                                                                                                                                                           protease
1
33
496
IS 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                              PR00722; CHYMOTRYPSIN
PR00018; KRINGLE.
PD000395; Kringle; 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S01.982;
               Similarity
                                                                                                          129
212
212
306
396
396
496
498
488
295
569
569
1636
   Conservative
                                                  ₽
K
                                                                                                                                                                                                                                                                                                                                                                               TRYPSIN_DOM; 1.
                                               564 R
82944 MW;
                                                                                                          124
207
289
384
470
728
97
728
607
607
295
569
569
             92.5%;
91.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ALT_INIT
   21;
                                                           Missing (in isoform & /FTId=VSP 005408.
N -> K (in Ref. 2).
V -> L (in Ref. 2).
R -> H (in Ref. 3).
                                                                                                          Interchain (By similarity).
N-linked (GlcNAc. ...) (Poten Nissing (in isoform Short).
Score 2408; DI
Pred. No. 3.2e
21; Mismatches
                                                                                                                                                                                                                                 Kringle 1.
Kringle 2.
Kringle 3.
                                                                                                                                                                                 Serine protease-like.
By similarity.
By similarity.
                                                                                                                                                                                                                     Kringle 4.
                                                                                                                                                                                                                                                                      PAN
                                                                                                                                                                                                                                                                                 similarity).
                                                                                                                                                                                                                                                                                             Pyrrolidone carboxylic
                                                                                                                                                                                                                                                                                                      Hepatocyte growth factor alpha chain. Hepatocyte growth factor beta chain.
                                                                                                                                                                                                                                                                                                                                By similarity.
                                                 -> L (in Ref. 2).
-> H (in Ref. 3).
A0381FC497534328 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (See http://www.isb-sib.ch/announce/
             DB 1;
.2e-172;
                                                                                                                                                                                                                                                                                                                                                       Glycoprotein;
cid; Repeat;
                          Length
     Indels
                                                                                                                                  (Potential). (Potential). (Potential).
                                                                                                                                                                                                                                                                                              acid
                                                                                                                        (Potential)
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   0
   Gaps
     0
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gh a collaboration

collaboration - L outstation -

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RESULT 7
                                                   MEDLINE=91031482; PubMed=2146117;

MEDLINE=91031482; PubMed=2146117;

A Okajima A., Miyazawa K., Kitamura N.;

"Primary structure of rat hepatocyte growth factor and inductio

"primary structure of rat hepatocyte growth factor and inductio

fis mRNA during liver regeneration following hepatic injury.";

Fur. J. Biochem. 193:375-381(1990).

Fur. J. Biochem. 103:375-381(1990).

Fu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-NOV-1990 (Rel. 16, Created)
01-NOV-1990 (Rel. 16, Last sequence update)
25-OCT-2004 (Rel. 45, Last annotation update)
Hepatocyte growth factor precursor (Scatter f.
(Hepatopoeitin A).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Proc. Natl. Acad. Sci.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Toshiro K., Hagiya M., N
Shimizu S., Nakamura T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN=Wistar;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Name=Hgf
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subfamily.
SIMILARITY:
SIMILARITY:
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on of the mRNA in rat tissues.";
tl. Acad. Sci. U.S.A. 87:3200-3204(1990)
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Sciurognathi; Muridae;
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PRINTS; PR007152; HGF MST1; 1
PRINTS; PR00712; CHYMOTRYPSIN.
PRINTS; PR00118; KRINGLE.
Pr0Dom; PD000195; Kringle; 4.
SMART; SM00130; KR; 4.
SMART; SM00473; PAN AP; 1.
PR0SITE; PS00702; KRINGLE 1; 4.
PR0SITE; PS00707; KRINGLE 2; 4.
PR0SITE; PS50748; PAN; 1.
PROSITE; PS50748; PAN; 1.
PROSITE; PS50748; PAN; 1.
PROSITE; PS50749; TRYPSIN DOM;
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PIR; A35644; A35644.
PIR; P14210; 1BHT.
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InterPro;
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EMBL; X54400;
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c; IPR003014; PAN.
c; IPR0030609; Pan. app.
c; IPR009003; Pen. Ser Cys.
c; IPR001254; Peptidase S1.
c; IPR001314; Peptidase_S1A.
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PS50240; TRYPSIN_DOM; 1.
PS50240; TRYPSIN_DOM; 1.
PSTOCKET Sequencing; Glycoprotein; Growth factor; Kringle;
Protein sequencing; Repeat; Serine protease homolog; Signal.
                  WSSMIPHEHSFLPSSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVEC
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Hepatocyte growth factor beta chain.
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                                                                         Query Match
Best Local S
Matches 341
                                                                                                                                                                                                     HSSP, P14210; 10MN.

R HSSP; P14210; 10MN.

R GO; GO:0004263; F:chymotrypsin activity; IEA.

R GO; GO:0004295; F:trypsin activity; IEA.

R GO; GO:0004508; Kringle; 4.

Pfam; PF00051; Kringle; 4.

Pfam; PF00099; Trypsin; 1.

Pfam; PF00099; Trypsin; 1.

PFAMPTS; PR00715; HGF MST1; 1.

PFINTS; PR00715; KRINGLE.

R PRODOM; PR00018; KRINGLE.

R PRODOM; PD000395; Kringle; 4.

R PRODOM; PD000395; Kringle; 4.

R SMART; SM00473; PAN AP; 1.

R SMART; SM00473; PAN AP; 1.

R SMART; SM00120; Tryp.SPC; 1.

R PROSITE; PS500021; KRINGLE_1; 4.

R PROSITE; PS500021; KRINGLE_1; 4.

R PROSITE; PS50040; PAN; 1.

PROSITE; PS50140; TRYPSIN DOM; 1.

PROSITE; PS50240; TRYPSIN DOM; 1.

PROSITE; PS50240; TRYPSIN DOM; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q90978 PRELIMINARY;
Q90978; Q90866;
Q1-JAN-1998 (TrEMBLrel. 05
Q1-JAN-1998 (TrEMBLrel. 05
Q1-MAR-2004 (TrEMBLrel. 26
Hepatocyte growth factor /
Name=HGF/SF;
                                                                                                                                                                PROSITE; PS
PROSITE; PS
Hydrolase;
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Malus (Chicken).
Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota: Aves; Neognathae; Galliformes; Phasianidae; Phasiani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=96029010; PubMed=7554499; Thery C., Sharpe M.J., Batley S.J., "Byression of HGF/SF, HGF1/MSP and during early chick development."; Dev. Genet. 17:90-101(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -!- SIMILARITY: Belongs to p
EMBL; X84045; CAA58864.1; -.
PIR; I51285; I51285.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                         Local Similarity
les 341; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             œ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QYPHKHDITPENFKCKDLRENYCRNPDGAESPWCFTTDPNIRVGYCSQIPKCDVSSGQDC
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                             KRRNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDKAR
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  726
                                                                                                                                                                                         Kringle;
                                                                           Conservative
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82865 MW; 5BD060
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76
                                                                                               6.89
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26, Last annotation updat
/scatter factor.
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                                                                         49;
                                                                    Score 2052; DE
Pred. No. 1.6e-
49; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Created)
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                                                                                                                                                                   SBD06CFB5C40B003 CRC64;
  peptidolysis;
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c-met
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                                                                      DB 2;
.6e-145;
les 53;
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                                                                      Gaps
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GO; GO:0004263; F:chymotrypsin activity; IEA.

GO; GO:00008233; F:peptidase activity; IEA.

GO; GO:0004295; F:trypsin activity; IEA.

GO; GO:0006508; P:proteolysis and peptidol

pfam; PF00051; Kringle; 4.

Pfam; PF00089; Trypsin; 1.

pfam; PF00089; Trypsin; 1.

PIRSF; PIRSF001152; HGF_MST1; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PR00018; KRINGLE.
PRODOM; PD000395; KRING1e; 4.
SMART; SM00130; KR; 4.
SMART; SM00473; PAN AP; 1.
SMART; SM000473; PAN AP; 1.
PROSITE; PS00021; KRINGLE 1; 4.
PROSITE; PS50070; KRINGLE 2; 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q91402;
Q91402;
01-NOV-1996
01-NOV-1996
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01-NOV-1996 (TrEMBLrel. 0
01-MAR-2004 (TrEMBLrel. 2
Hepatocyte growth factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hepatocyte Name=HGF;
                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; S77422; AAB34354.2;
HSSP; P14210; 1GMN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=Tailbud;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Xenopodinae.
NCBI_TaxID=8353;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CNGESYRGLMDHTESGKI CQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWCYT
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T., Shiokawa K.;
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Matches 305
                MEDLINE=95237013; PubMed=7720585;
Streit A., Stern C.D., Thery C., Ireland |
Sharpe M.J., Gherardi E.;
"A role for HGF/SF in neural induction an node during gastrulation.";
Development 121:813-824(1995).
EMBL; X80131; CAA56430.1; -.
HSSP, P00747; IXIO.
InterPro; IPR000001; Kringle.
InterPro; IPR003014; PAN.
InterPro; IPR003014; PAN.
InterPro; IPR003014; PAN.
InterPro; IPR003014; PAN.
Pfam; PF00051; Kringle; 4.
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PROSITE; PS
Hydrolase;
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                  Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata;
Archosauria; Aves; Neognathae;
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Name=HGF/SF;
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Xenopus laevis (African clawed frog).

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Xenopus laevis (African clawed frog).

Xenopus laevis (African clawed frog).
MEDLINE-2238257; PubMed=12477932; DOI=10.1073/pnas.242603899; Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Klausner R.D., Collins F.S., Wagner L., Schemmen C.M., Schuler G.D., Altschal S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heiseh F., Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., Scheete M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.I. Scheetz T.I. Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.: Bosak S.A., McEwann F.J., McKernan K.J., Malek J.A., Gunaratne P.H., Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.: Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              M00473; PAN AP; 1.
PS00021; KRINGLE 1;
PS50070; KRINGLE 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PS50948; PAN; 1.
Signal.
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Pred. No. 8.3e-
47; Mismatches
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Last sequence update)
Last annotation updat
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Best Local
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Submitted (JUN-2004) to the EMBL/GenBank/DDBJ dat

Submitted (JUN-2004) to the EMBL/GenBank/DDBJ dat

EMBL; BC073334; AAH73334.1; -.

GO; GO:0005509; F:calcium ion binding; IEA.

GO; GO:000599; F:chrombin activity; IEA.

GO; GO:0007596; P:blood coagulation; IEA.

GO; GO:0006508; P:proteolysis and peptidolysis;

InterPro; IPR000001; Kringle.

InterPro; IPR003014; PAN.

InterPro; IPR003014; PAN.

InterPro; IPR003019; Pan app.

InterPro; IPR003019; Paptidase_S1A_pr.

Pfam; PP00051; Kringle; 4.

Pfam; PP00054; PAN; 1.
                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PRO0018; KRINGLE.
PRINTS; PRO1505; PROTHROMBIN.
ProDom; PD000395; Kringle; 4.
SMART; SM00130; KR; 4.
SMART; SM00473; PAN AP; 1.
PROSITE; PS00021; KRINGLE 1; 4
PROSITE; PS50070; KRINGLE 2; 4.
PROSITE; PS50948; PAN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A., Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S., Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E., Jones S.J., Marra M.A.; "Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Genetic and genomic tools initiative.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Richardson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Klein S.L., Strausberg R.L.,
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                                                                            PHTRWEYCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDSQYPH
                                                                                                                                 GESYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWCYTLD
                                                                                                                                                                     FPHDHKFSPIHW--PDLEENYCRNPDSDPEGPWCYTTDKNIRHQYCGIKKCEDAVCLTCN
                                                                                                                                                                                          IPHEHSFLPSSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVECMTCN
                                                                                                                                                                                                                                             RNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDKARKQ
                         EHDMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNC~DMSHGQDCYRG
                                                                                                               GEDYRGSVDRTESGKECQRWDLQTPHAHPYKPEKYPDKSLDDNYCRNPDSSERPWCYTTD
                                                                                                                                                                                                                              CRLLPWTQNSANVLLQRNVQYDLYQKKDYIRDCVVGNGNTYRGTVSKTKSGRTCQRWRLK
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SHRFLPEKYPCKGLDENYCRNPDGSEAPWCFTTLPGMRMAYCFQ1KRCKDDVLEPDCYHG
                                                       PNVEKEFCRITKCKKQRLSNIEI---TSTCFKERGEGYRGKANTTTSGIPCQRWDSQTPQ
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                                                                                                                                                                                                                                                                                                                                                                                                     AA;
                                                                                                                                                                                                                                                                                                                                                                                                     52467 MW;
                                                                                                                                                                                                                                                                                                                                                          46.6%;
                                                                                                                                                                                                                                                                                                                                         74;
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                                                                                                                                                                                                                                                                                                                                                          Score 1214;
Pred. No. 6
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                                                                                                                                                                                                                                                                                                                                              Mismatches
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RESULT 12

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Best Local S
Matches 207
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SMART; SM00130; KR; 4.
SMART; SM00473; PAN_AP; 1.
SMART; SM00473; Tryp_SPC; 1.
SMART; SM0020; Tryp_SPC; 1.
PROSITE; PS00021; KRINGLE 1; 4.
PROSITE; PS50070; KRINGLE 2; 4.
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Name=HGFI/MSP;
Gallus gallus (Chicken).
Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Chordata; Galliformes; Phasianidae; Phasiani
                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE; PS50948; PAN; 1.

PROSITE; PS50940; TRYPSIN DOM; 1.

Hydrolase; Kringle: Profine
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Thery C., Sharpe M.J., Batley S.J., "Expression of HGF/SF, HGF1/MSP and during early chick development."; Dev. Genet. 17:90-101(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-NAR-2004 (TrEMBLrel. 26, Last annotation update)
Hepatocyte growth factor-like/macrophage stimulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GG; GO:0004263; F:chymotrypsin activity; IEA.
GO; GO:0008233; F:peptidase activity; IEA.
GO; GO:0004295; F:trypsin activity; IEA.
GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS00021;
PROSITE; PS50070;
PROSITE; PS50948;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00051; Kringle; 4.
pfam; PF00024; PAN; 1.
pfam; PF000089; Trypsin; 1.
prns; PIRSF001152; HGF_MST1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; X84043; CAA58862.1; -. HSSP; P00747; ICEA.
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                                                                                                                                                                                                                                                                                                                                               l Similarity
207; Conser
                                                                                                                                                                                                                                                                                               ഗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PR00722; CHYMOTRYPSIN.
PR00018; KRINGLE.
                                                                            IPHEHSFLPSSYRGKDLQENYCRNPRGEEGGFWCFTSNPEVRYEVCDIPQCSEVECMTCN
                                                                                                                                                                          CLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQPWSSM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FROM N.A.
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     GESYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWCYTLD
                                                                                                                                                   CQLLPWSQRSPGARLQKNIHYDLYQKKDFLRECIVANGTSYRGTRDTTERGLRCQHWQAT 135
                                                                                                                                                                                                                                                 RSPLNDFQRLRGTELRAAPNEPPPSAPAHGAAQQCAQRCANRP----DCRAFHHERQSQL
                                                                                                                                                                                                                                                                                               RNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDKARKQ
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                                                                                                                                                                                                                                                                                                                                                                                                                                           Kringle; Protease; Serine 704 AA; 79341 MW; CABODE
                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PubMed=7554499;
                                                                                                                                                                                                                                                                                                                                                                      46.4%;
                                                  LEENYCRNPDRDKRGPWCYTVDPNVRHQSCGIKKCEDAVCMTCN
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                                                                                                                                                                                                                                                                                                                                               Score 1209.5; DB
Pred. No. 2.4e-82;
1; Mismatches 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                Serine protease. CAB0D8CC41367C37
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c-met
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                                                                                                                                                                                                                                                                                                                                                  149;
                                                                                                                                                                                                                                                                                                                                                                                             DB 2;
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                                                                                                                                                              Query Match
Best Local S
Matches 207
                                                                                                                                                                                                                                                                                                                                         PEAM; PE00024; PAN; 1.

PEAM; PF00024; PAN; 1.

PEAM; PF00028; Trypsin; 1.

PIRSF; PIRSF001152; HGF MST1; 1.

PRINTS; PR00722; CHYMOTRYPSIN.

PRINTS; PR00018; KRINGLE.

PRINTS; PR001805; PROTHROMBIN.

PRODOM; PD000395; Kringle; 4.

SMART; SM00130; KR; 4.

SMART; SM00130; KR; 4.

SMART; SM00020; Tryp_Sec; 1.

PROSITE; PS00021; KRINGLE 1; 4.

PROSITE; PS00070; KRINGLE 2; 4.

PROSITE; PS50070; KRINGLE 2; 4.

PROSITE; PS50070; KRINGLE 2; 4.

PROSITE; PS50070; KRINGLE 2; 4.
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01-NOV-1996 (TrEMBLrel. (
01-NOV-1996 (TrEMBLrel. (
01-MAR-2004 (TrEMBLrel. 2
Growth factor Livertine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL;
HSSP;
GO; GC
                                                                                                                                                                                                                                                                      Hydrolase;
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ruiz i Altaba A., Thery C.;
Submitted (MAY-1996) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Ver
Amphibia; Batrachia; Anura; Mesobatrachia;
Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                           PROSITE; PS50240; TRYPSIN_DOM; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; U57455; AAB52574.1; -.

BISSP; P00746; 1FDP.

GO: GO:0005509; F:calcium ion binding; IEA.

GO: GO:0004263; F:chymotrypsin activity; IEA.

GO: GO:0008233; F:peptidase activity; IEA.

GO: GO:0003809; F:thrombin activity; IEA.

GO: GO:0004295; F:trypsin activity; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=8355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Xenopus laevis (African clawed frog)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           418
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                                                                                                                                                                                        Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HEHDMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMS-HGQDCYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQPWSSM
                                                       RSALNDYQRSKGLELVHMNNG-GVKQEIQSEIQVCAKQCSD----LLDCRSFVYNWKSQT
                                                                                                       RNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDKARKQ
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                                                                                                                                                                                                                                                                      Kringle;
716 AA;
                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                   Protease; Serine protease.
81971 MW; 508376A0E4398798
                                                                                                                                                                                  46.4%;
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01,
26,
                                                                                                                                                            Score 1208; DE Pred. No. 3.2e-75; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              peptidolysis; IEA.
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                                                                                                                                                            ; DB 2;
3.2e-82;
hes 149;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vertebrata;
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                                                                                                                                                                                                                                                                      CRC64;
                                                                                                                                                                                                           Length 716;
                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Euteleostomi;
; Pipidae;
                                                                                                                                                              12;
                                                                                                                                                            Gaps
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RESULUTION HAS SEEN H
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE-Liver;

MEDLINE=92002016; PubMed=1655021;

Han S., Stuart L.A., Friezner Degen S.J.;

Han S., Stuart tinn of the DNF1552 locus on human chromosome identification of a gene coding for four kringle domains with the properties of the properti
                   "Macrophage stimulating protein: purification, partisequence, and cellular activity.";
J. Exp. Med. 173:1227-1234(1991)
-i- FUNCTION: Probably has no proteolytic activity, characteristic of serine proteases catalytic sit
                                                                                                                                                            Skeel A.,
Leonard E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HGFL HUMAN STANDARD; PRT; 711 AA.
P26927; Q1350; Q14870;
01-AUG-1992 (Rel. 23, Created)
01-AUG-1992 (Rel. 23, Last sequence update)
25-OCT-2004 (Rel. 45, Last annotation update)
Hepatocyte growth factor-like protein precursor (Mastimulatory protein) (MSP) (Macrophage stimulating Mame-MSTI; Synonyms=HGFL;
                                                                                                                                                                                                                                                                                                                                MEDIJINE-933.0141; PubMed-8393443; Yoshimura T., Yuhki N., Wang M.H., Skeel A., Leonard E.J.; Yoshimura T., Yuhki N., Wang M.H., Skeel A., Leonard E.J.; Yoshimura T., Yuhki N., Wang M.H., Skeel A., Leonard E.J.; Policy Confirms MSP as a member of the family of kringle proteins and locates the MSP gene on chromosome 3."; J. Biol. Chem. 268:15461-15468(1993).
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                              PubMed=1827141;
                                                                                                                                                                                                                                       TISSUE=Plasma;
                                                                                                                                                                                                                                                                                            SEQUENCE
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AND SUBUNIT.
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Pfam; PF00051; Kringle; 4.
Pfam; PF00024; PAN; 1.
Pfam; PF000089; TrypSin; 1.
PIRSF; PIRSF001152; HGF MST1; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PR00018; KRINGLE.
PRINTS; PR01505; PROTHROMBIN.
PRODOm; PD000395; Kringle; 4.
                                                                                                                                                                                                                                                                                                                                                                                                           SMART; SM00130; KR; 4.

SMART; SM00473; PAN AP; 1.

SMART; SM00020; Tryp SPc; 1.

PROSITE; PS00021; KRINGLE 1; 4.

PROSITE; PS50070; KRINGLE 2; 4.

PROSITE; PS50948; PAN; 1.
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InterPro; IPR003014; PAN.
InterPro; IPR003609; Pan app.
InterPro; IPR00303; Pept Ser Cys.
InterPro; IPR001254; Peptidase S1.
InterPro; IPR001314; Peptidase S1A.
InterPro; IPR003366; Peptidase S1A.pr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEROPS; S01.975; -.
Genew; HGNC:7380; MST1.
MIM; 142408; -.
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EMBL; U37055; AAC50471.1; -.
EMBL; L11924; AAA59872.1; -.
EMBL; A40331; A47136.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     entities requires a license agreement (Son send an email to license@isb-sib.ch).
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SIMILARITY: Contains 4 kringle domains.
SIMILARITY: Contains 1 PAN domain.
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together by disulfic
SIMILARITY: Belongs
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Serine protease-like.
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P70006;
01-FEB-1997 (TrEMBLrel. 02, Created)
01-FEB-1997 (TrEMBLrel. 02, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Hepatocyte growth factor-like protein precursor.
Xenopus laevis (African claused frog).
              TISSUERKIdney, and Liver;
TISSUE-Kidney, and Liver;
MEDLINE=96404125; PubMed=8808403;
Abberger F., Schmidt G., Richter K.
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                                                                                      Xenopodinae; Xenopus.
NCBI_TaxID=8355;
                                                                                                                     Eukaryota; Metazoa; Chordata;
Amphibia; Batrachia; Anura; M
                                                                                                                                   Eukaryota;
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E -> K (in dbsNP:7798)

/FTId=VAR 014569.

R -> G (in Ref. 3).

C -> E (in Ref. 3).

R -> E (in Ref. 3).

PS -> SI (in Ref. 3).

PS -> E (in Ref. 3).

PS -> F (in Ref. 3).
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By similarity.
N-linked (GlcNAC.
N-linked (GlcNAC.
N-linked (GlcNAC.
N-linked (GlcNAC.
Y-> C.
                                                                                                                       Mesobatrachia;
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C -> F
                                                                                                                                   Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            596ED21F180290E4 CRC64;
                               DOI=10.1016/0925-4773 (95) 00458-0;
 growth
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                                                                                                                       Pipoidea; Pipidae;
                                                                                                                                                                                 update)
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T gastrilation, ";

I Mech. Dev. 54:23-37(1996).

R MENDL; Y08734; CAA69999.1; -.

R MSSP; P00746; IFDP.

R MSSP; P00746; IFDP.

R GO; GO:0005509; F:calcium ion binding; IEA.

GO; GO:0004263; F:chymotrypsin activity; IEA.

GO; GO:0004263; F:peptidase activity; IEA.

R GO; GO:0003809; F:thrombin activity; IEA.

R GO; GO:0004295; F:trypsin activity; IEA.

R GO; GO:0005506; P:blood coagulation; IEA.

R GO; GO:0005508; P:proteolysis and peptidolysis; IEA.

R GO; GO:0005508; P:proteolysis and peptidolysis; IEA.

R GO; GO:000508; P:proteolysis and peptidolysis; IEA.

InterPro; IPR0003014; PAN.

InterPro; IPR003014; PAN.

InterPro; IPR001314; Peptidase_S1A.

InterPro; IPR001314; Peptidase_S1A.

InterPro; IPR003066; Peptidase_S1A.

InterPro; IPR003066; Peptidase_S1A.

InterPro; IPR00306; Peptidase_S1A.

InterPro; IPR00306; Peptidase_S1A.

InterPro; IPR00306; P:proteol_Ser_Cys.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 201; Conserv
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Pfam; PF00024; PAN; 1.
Pfam; PF00024; PAN; 1.
Pfam; PF00089; Trypsin; 1.
PIRSF; PIRSF001152; HGF MST1; 1.
PRINTS; PR00712; CHYMOTRYPSIN.
PRINTS; PR001018; KRINGLE.
PRINTS; PR01505; PROTHROMBIN.
PRODOM; PD000305; Kringle; 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SMART; SM00130; KR; 4.

SMART; SM00473; PAN AP; 1.

SMART; SM00020; TYPF SPC; 1.

SMART; SM00020; KRINGLE 1; 4.

PROSITE; PS00070; KRINGLE 2; 4.

PROSITE; PS50040; TRYPSIN_DOM; 1.

PROSITE; PS50240; TRYPSIN_DOM; 1.
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                                  NGKNYMGNLSQTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPWCYT
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                                                                                                                                                                                       PNVEREFCHITKCKKQRISNIEI---TSTCFKERGEGYRGKANTTTSGIPCQRWDTQAPH
                                                                                                                                                                                                                    PHTRWEYCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIMNGIPCQRWDSQYPH
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  NGELYRGRVSKTRKGIMCRRWEEKQNDLELSLA-QPYLVPLEENYCRNPDRDSHGPWCYT
                                                                                           VHRFLPEKYPCKGLDENYCRNPVGSEAPWCFTTLKNMRMAYCFQIKRCTDDVVEPECYHG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29 717 hepatocyte growth factor-like protein.
717 AA; 82017 MW; 6F877A432C8CDD54 CRC64;
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; Pred. No. 8.1e-80;
78; Mismatches 152;
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MDPNTPFDYCALKPCAGDKVLTL
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Match	Length	DB	ID	Description
י	2601	99.9	447	7		37393 Human h
2	2601		447	7	σ	3266 Human
ω	2601	99.9	697	w	AAY98485	5 Hepat
4	2601	9	697	w	AAY59030	
ഗ	2601	9	697	4	AAB45838	
თ	2601	99.9	697	4	AAU04275	5 Nuclear
7	2601	99.9	728	N	AAR25676	
8	2601	99.9	728	N	AAR20005	v
9	2601	99.9	728	N	AAR40862	
10	2601	99.9	728	N	AAR40863	Aar40863 Competat
11	2601	99.9	728	N	AAR42062	Aar42062 Vascular
12	2601	99.9	728	N	AAR87522	Aar87522 Mutant he
13	2601	99.9	728	N	AAR87524	Aar87524 Mutant he
14	2601	99.9	728	N	AAR87525	Aar87525 Mutant he
15	2601	99.9	728	Ν	AAR87523	Mutant
16	2601	99.9	728	N	AAW00340	Aaw00340 Wild type
17	2601	99.9	728	2	AAW00338	Aaw00338 Human hep
18	2601	99.9	728	N	AAW59922	
19	2601	99.9	728	ผ	AAW58696	Aaw58696 Human hep
20	2601	99.9	728	N	AAW42998	Aaw42998 Recombina
21	2601	99.9	728	N	AAW39207	Aaw39207 Human hep
22	2601	99.9	728	σ	ABP58128	Human
23	2601	99.9	728	7	ADB61534	Hepat
24	2601	99.9	728	8	ADM97652	Adm97652 Human hep
25	2601	000	739	,		

Query Match

99.9%;

Score 2601;

DB 7;

Length

447;

Human hep	Aar52943	AAR52943	N	728	98.5	2565	45
Human hep	Aar52940	AAR52940	N	728	98.5	2565	44
Human hep	Aar52948	AAR52948	N	728		2565	43
Human hep	Aar52944	AAR52944	N	728	98.5	2565	42
Human hep	Aar52947	AAR52947	N	728	98.5	2565	41
Human hep	Aar52945	AAR52945	2	728	98.5	2565	40
Human hep	Aar52942	AAR52942	N	728	98.5	2565	39
Human hep	Aar52941	AAR52941	N	728	98.5	2565	38
Human hep	Aar12792	AAR12792	N	728	98.5	2565	37
Hepatocyt	Aar47227	AAR47227	N	728	99.0	2577	36
Human hep	Aaw88530	AAW88530	N	728	99.3	2586	35
Human hep	Aaw88531	AAW88531	2	728	99.3	2587	34
Human hep	Aaw88532	AAW88532	N	728	99.4	2588	3
Human hep	Aaw88529	AAW88529	N	728	99.5	2591	32
Hepatocyt	Aar39521	AAR39521	2	728	99.7	2595	3
Human hep	Aar14243	AAR14243	N	728		2595	30
Human leu	Aar15623	AAR15623	N	728		2595	29
Hepatic p	Aar10656	AAR10656	N	727	99.7	2595	28
N-termina	Aay57173	AAY57173	w	447		2599	27
Chimeric	Ads19044	ADS19044	œ	951	99.9	2601	26

ALIGNMENTS

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RESULT 1
ADE37393
ID ADE3
 The invention comprises a conjugate that contains an N-terminal fragment of hepatocyte growth factor (HGF/SF) consisting of the hairpin domain and the four kringle regions of the alpha-chain and 1-3 polyethylene glycol (PEG) groups. The conjugate of the invention is useful for the preparation of a medicament for the treatment of cancer. The present amino acid sequence represents the human N-terminal four kringle-containing fragment of hepatocyte growth factor (NK4).
Sequence 447 AA;
                                                                                                                                                                                    Conjugate comprises an N-terminal fragment of hepatocyte growth factor consisting of the hairpin domain and the four kringle regions of the alpha-chain and one to three polyethylene glycol groups, useful for
                                                                                                                                                                                                                                                   WPI; 2003-749561/71.
N-PSDB; ADE37392.
                                                                                                                                              Disclosure; SEQ ID NO 2; 25pp; English.
                                                                                                                                                                        treating cancer.
                                                                                                                                                                                                                                                                                                                                                       23-FEB-2001; 2001EP-00104640
                                                                                                                                                                                                                                                                                                                                                                                                                  EP1234583-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human hepatocyte growth factor N-terminal four kringle fragment.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADE37393;
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                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    conjugate; HGF/SF; hairpin domain; kringle region; PEG group; cancer;
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ADM83726 2
ADM83266 ID 8208
XX ADM8 AC ADM8
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AC ADM8
XX NK4
XX NK4
XX NK4
XX NC4
XX Stom
AC ADM8
XX COlo
XX COlo
XX Homo
XX Homo
XX Homo
XX 1020
XX 1020
XX 1020
XX WS-F
XX 25-F
XX (NAK
PA (NAK)
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Matches
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(MATS/)
                                                                                                                                                                                                                                                                                                                                                                                    Homo
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                                         New NK14
                                                                              N-PSDB; ADM83264.
                                                                                                                                      Nakamura
                                                                                                                                                                                                                                                                    27-SEP-2002;
                                                                                                                                                                                                                                                                                                                                               US2003162736-A1
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                     treating
                                                                                                                                                                                                                                  25-FEB-2002; 2002JP-00048644
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nes 446; Conservative
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                                                                                                                                                                         NAKAMURA T. MATSUMOTO K.
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                   gene, useful for producing a medicament for preventing diseases caused by neovascularization, e.g. cancer.
                                                                                                                                    'n
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Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 447
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                         CYTGNPLIPWDYCPISRCEGDTTPTIV
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20-MAR-1992;
19-MAR-1993;
                                                                                                                                                                           carcinogenesis;
                                                                                                                                                                                           Transporter system; nucleic acid delivery; gene therapy;
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                                              14-DEC-1993;
                                                                               07-MAR-2000
                                                                                                                                              Synthetic
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92US-00855389
93WO-US002725
                                                93US-00167641
                                                                                                                                                                            cardiovascular disease; infection.
                                                                                                                                                                                                                                                                                                                      protein;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present invention relates to a transporter system for delivering concleic acid to a cell. The system comprises a nucleic acid binding complex, consisting of a binding molecule bonded non-covalently to the nucleic acid, and covalently to a surface ligand, and a lytic agent. The binding molecule is spermine or a spermidine derivative. Nucleotide sequences AAA36633-A36652 and peptide sequences AAY98456-Y98500 are used in the construction of the transporter system of the invention. The transporter system is used in gene therapy, particularly to deliver nucleic acids to hepatocytes, muscle cells or bone forming cells, e.g for treating cardiovascular disease, cancer, and infection. The transporter systems are also used to create transgenic animals (as models for human carcinogenesis or disease or for drug testing). Other uses include transforming cells to produce porteins, or transfeting cells in vitro to study the function of the nucleic acid. The use of a surface ligand allows specific targeting of selected cells and tissues. The lytic agent provides for release of the nucleic acid into the cellular interior, from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Sim.
Matches 446;
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Pred. No. 8.7e-165;
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CC delivering nucleic acid into a cell. The NTS contains but is not limited CC to 5 components; (a) the nucleic acid or a macromolecule to be delivered; (b) a moiety that recognizes and binds to a cell surface receptor or CC antigen or is capable of entering a cell through cytosis; (c) a nucleic capable of movement through a moiety that is CC capable of moving or initiating movement through a nuclear membrane; and/ CC or (e) a lysis moiety that enables the transport of the entire complex CC from the cell surface directly into the cytoplasm of the cell. The NTS CC delivers nucleic acid into the cellular interior as well as the nucleus CC of specific cells. The NTS can be used to treat disorders by targeting specific nucleic acid accordingly. The NTS can also be used to create CC animal model. The NTS can be used in vitro with tissue culture cells CC which allows the role of various nucleic acids to be studied by targeting Specific expression into specifically targeted tissue culture cells. The CC lysis agent within the NTS avoids the problem of endosomal/lysosomal
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                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 697
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                                                                    WSSMIPHEHSFLPSSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVEC
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acid. The nucleic acid transporter system can also be used in a method for the in vivo targeting of the insertion of DNA into a cell. It can also be used in processes for producing transformed cell lines. The system can be used to deliver a variety or proteins and polypeptides, such as hormones, growth factors, enzymes, clotting factors, apolipoproteins, receptors, drugs, oncogenes, tumor antigens, tumor suppressors, viral antigens, parasitic antigens, and bacterial antigens. The transporter system uses lysis agents to overcome the problems of endosomal/lysosomal degradation seen with prior art systems
                                                                                                                                                 This invention describes a novel system (1) for delivering a nucleic acid to a cell, comprising a binding complex comprising a ligand binding molecule noncovalently bound to a nucleic acid and covalently linked to a surface ligand, and a second binding complex comprising a second binding molecule noncovalently bound to a nucleic acid and covalently linked to a nuclear ligand. The complexes are simultaneously bound to the nucleic nuclear ligand.
                                                                                                                                                                                                                                                                                                  Nucleic acid transporter system for delivering nucleic acid useful for delivering proteins and polypeptides to cells, ir growth factors, enzymes, hormones, and tumor suppressors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nucleic acid delivery; nucleic acid transporter growth factor; clotting factor; apolipoprotein; tumor antigen; tumor suppressor; viral antigen;
                                                                                                                                                                                                                                                                       Claim 8;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ARKQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ERKRRNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MTCNGESYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ARKQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQP
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                                                                                                                   Smith
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         transport; cytosis; ligand; lysis
; hepatocyte; muscle; bone forming
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                                                                                                                                                                                                         92US-00855389.
93WO-US002725.
93US-00167641.
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Pred. No. 8.7e-165;
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Nucleic acid transport system, useful

system, useful for such as cancer in

creating transgenic animals for an animal model.

assessing human disease

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RESULT 7

AAR25671
ID AAR25
XX AAR22
XX AAR2
XX AAR2
XX Reco
XX HGF;
XW Clin
XX HGF;
XW Lin
XX HOMO
XX HOMO
XX HOMO
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                                                                                                                                                                                                                HGF; enhance growth; preparing transgenic animals; hepatic clinical diagnostic reagent; drug.
                                                                                                                                                                                                                                                                                               Recombinant human hepatocyte
  19-NOV-1990;
                                                        30-JUN-1992
                                                                                                          JP04183394-A
                                                                                                                                                                                                                                                                                                                                                       20-JAN-1993
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Pred. No. 8.7e-165;
1; Mismatches 0;
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RESULT 8
AAR2000 AAR2
ID AAR2
XX
AAC AAR2
XX
DT 24-M
XX
DE Huma
XX
KW HGF;
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KW HGF;
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Homo
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PN EP46

24-MAR-1992

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entry

Human hepatocyte

HGF; kidney regeneration; nephritis

Homo sapiens

AAR20005 standard;

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                                              YRGNGKNYMGNLSQTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPW
                                                           YRGNGKNYMGNLSQTRSGLTCSMWDKNMEDLHRHI FWEPDASKLNENYCRNPDDDAHGPW
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N-PSDB;
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 YRGNGKNYMGNLSQTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPW
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Score 2601; DB 2; Pred. No. 9.1e-165; 1; Mismatches 0;

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                                                                                                              Similarity
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                                                                           ERKRRNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDK
          WSSMIPHEHSFLPSSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVEC
                                        ARKQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSIIKSGIKCQP
                                                                 QRKRRNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDK
                                                                                                                                                                                                                    Page 11-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    standard;
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Query Match
Best Local Similarity
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RESULT 11
AAR42062
                                      This sequence represents a single chain protein which selectively enhances the growth of vascular endothelial cells. This protein was produced by the human tumour cell line HUCCA-II or HUCCA-III. This protein enhances the formation of new blood vessels and may be used to enhance healing of wounds, burns injuries, decubitus or post-operative tissue damage. It may also be used as a drug for cardiac angiopathy. (Updated on 25-MAR-2003 to correct PN field.)
Sequence
                                                                                                                                                                                                                 Claim 6; Page 18-21; 44pp; English.
                                                                                                                                                                                                                                                        Vascular endothelial cell growth factor protein - used for promoting angiogenesis in the treatment of cardiac angiopathy, wounds, burn injuries, postoperative tissue damage etc.
                                                                                                                                                                                                                                                                                                                                                                                                                   Sudo
                                                                                                                                                                                                                                                                                                                                                      N-PSDB;
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HUOCA-II; HUOCA-III; blood vessel; wounds; burns; decubitus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-MAR-2003
15-NOV-1993
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99.9%;

Score Pred.

2601; DB 2; No. 9.1e-165;

Length

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Gaps

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451 420 391 360 331 120

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                                        Disclosure; Page; 8pp; Japanese
                                                                              Novel derivative of hepatocyte growth factor - positions 492-494, for use in treating injured
                                                                                                                                                WPI; 1996-035890/04.
                                                                                                                                                                                                                            07-MAY-1994;
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/al to Ile-Glu-Gly-Arg-Thr"
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                                                                                                                                                                 Synthetic
                                                                                                                                                                                                       Hepatocyte growth factor; protease; cleavage recognition injury; blood vessel; point mutation.
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Misc-difference
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llarity 99.8%;
Conservative
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                                                                                                     Location/Qualifiers
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to Lys-Gln-Gly-Arg-Thr"
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Pred. No. 9.1e-165;
1; Mismatches 0;
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                                                                                  sequence: Lys-Glu-Leu-Arg-
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel derivative of hepatocyte growth factor - positions 492-494, for use in treating injured
                                           AAR87525
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                                           standard;
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Pred. No. 9.1e-165;
1; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                        The amino acid of the hepatocyte growth factor (HGF) generated to contain amino acid changes at residues 492-494. (Note - this sequence is not given in the specification but is based on the HGF sequence given in AAR20005). The generated mutant contains the sequence Lys-Gln-Gly-Arg-Val. which replaces the wild type sequence Lys-Glu-Leu-Arg-Val. The HGF is translated as single chain protein which is activated to a two chain protein by protease cleavage between residues 494-5, producing the alpha and beta chains. The novel sequence alters the protease recognition site, putativeted specifically at the site of injury in a blood vessel. (See AAR87522-5 for different HGF derivs.). The novel HGF derivs. were generated by point mutations using the oligonucleotides AAT06762-5
                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel derivative of hepatocyte growth factor - positions 492-494, for use in treating injured
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                                                                                                                                                                                                                                                                                  WSSMIPHEHSFLPSSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVEC
                                                                                                                                                                                                                             ARKQCLWFPFNSMSSGVKKBFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQP
                                                                                                                                                                                                                                                                   QRKRRNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVPDK
QYPHEHDMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSHGQDC
                                                                                                                                                                                                                                                                                                                                                                                   728
                                       YTLDPHTRWEYCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDS
                                                        YTLDPHTRWEYCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDS
                                                                                              MTCNGESYRGLMDHTESGKI CQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWC
                                                                                                                MTCNGESYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWC
                                                                                                                                                                                                            ARKQCL#FPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQP
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Val to Lys-Gln-Gly-Arg-Val"
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                                                                                                                                                                                                                                                                                                                                        Score 2601; DB 2; Pred. No. 9.1e-165;
                                                                                                                                                                                                                                                                                                                             Mismatches
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QYPHEHDMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSHGQDC

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                                                                                                                                                                              Query Match
Best Local Similarity
Matches 446; Conserv
                                                                                                                                                                                                                                                                                                                                            The amino acid of the hepatocyte growth factor (HGF) generated to contain amino acid changes at residues 492-494. (Note - this sequence is not given in the specification but is based on the HGF sequence given in AAR20005). The generated mutant contains the sequence Lys-Gln-Gly-Arg-Ile, which replaces the wild type sequence Lys-Glu-Leu-Arg-Val. The HGF is translated as single chain protein which is activated to a two chain protein by protease cleavage between residues 494-5, producing the alpha and beta chains. The novel sequence alters the protease recognition site, putatively introducing a Factor Xa recognition site. The novel HGF deriv. (See AAR87522-5 for different HGF derivs.). The novel HGF derivs. were generated by point mutations using the oligonucleotides AAT06762-5
                                                                                                                                                                                                                                                                                                Sequence 728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel derivative of hepatocyte growth factor - comprises a mutation positions 492-494, for use in treating injured blood vessels.
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Misc-difference
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21-JUN-1996
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page; 8pp; Japanese.
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              ARKQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQP
                                                                                                     ERKRRNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDK
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                                                                     QRKRRNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDK
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Val to Lys-Gln-Gly-Arg-Ile"
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                                                                                                                                                                                                           Score 2601; DB 2;
Pred. No. 9.1e-165;
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ARKQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQP

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                                                                                                                                                                                                                                                                                          WSSMIPHEHSFLPSSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVEC
                                                 YRGNGKNYMGNLSQTRSGLTCSMWDKNMEDLHRHI FWEPDASKLNENYCRNPDDDAHGPW
                                                                                                                                                                                                                                MTCNGESYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWC
 CYTGNPLIPWDYCPISRCEGDTTPTIV 447
                                                                                                             QYPHEHDMTPENFKCKDLRENYCRNPDGSSESPWCFTTDPNIRVGYCSQIPNCDMSHGQDC
                                                                                                                                                                       YTLDPHTRWEYCAIKTCADNTMNDTDVPLETTECIOGOGEGYRGTVNTIWNGIPCORWDS
                                                                                                                                                                                                                                                                         WSSMIPHEHSFLPSSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVEC
                               YRGNGKNYMGNLSQTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPW
                                                                                            QYPHEHDMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSHGQDC
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Search completed: October 3, 2005, 06:05:50 Job time: 174.465 secs

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CYTGNPLIPWDYCPISRCEGDTTPTIV

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Result
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Maximum Match 100%
Listing first 45 summaries
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1: /cgn2_6/ptodata/2/pubpaa/US07 PUBCOMB.pep:*

2: /cgn2_6/ptodata/2/pubpaa/US06 NEW PUB.pep:*

3: /cgn2_6/ptodata/2/pubpaa/US06 NEW PUB.pep:*

4: /cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep:*

5: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*

6: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*

7: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*

8: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*

9: /cgn2_6/ptodata/2/pubpaa/US09A_PUBCOMB.pep:*

10: /cgn2_6/ptodata/2/pubpaa/US09A_PUBCOMB.pep:*

11: /cgn2_6/ptodata/2/pubpaa/US09F_PUBCOMB.pep:*

13: /cgn2_6/ptodata/2/pubpaa/US09A_PUBCOMB.pep:*

14: /cgn2_6/ptodata/2/pubpaa/US10A_PUBCOMB.pep:*

15: /cgn2_6/ptodata/2/pubpaa/US10A_PUBCOMB.pep:*

16: /cgn2_6/ptodata/2/pubpaa/US10A_PUBCOMB.pep:*

17: /cgn2_6/ptodata/2/pubpaa/US10A_PUBCOMB.pep:*

18: /cgn2_6/ptodata/2/pubpaa/US10A_PUBCOMB.pep:*

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23: /cgn2_6/ptodata/2/pubpaa/US10B_PUB.pep:*

24: /cgn2_6/ptodata/2/pubpaa/US10B_PUB.pep:*

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Copyright (c) 1993 - 2005 Compugen Ltd
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    WS-10-98-1-629-1
WS-10-98-309-2
WS-10-926-088A-1
T US-10-926-088A-2
US-10-926-088A-2
US-10-872-198-120
US-10-872-198-120
US-10-813-805-10
US-10-498-332-7
US-10-498-332-7
US-10-498-332-7
US-10-498-332-7
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Sequence 1, Appli
Sequence 2, Appli
Sequence 120, Appli
Sequence 120, App
Sequence 2, Appli
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Sequence 2, Appli
Sequence 7, Appli
Sequence 1, Appli
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equence 4,	quence 2,	equence 13	equence 13	equence 13	equence 12	equence 11	equence 11	equence 22	e 2,	134,	133, Ap	Seguence 132, App	53,	: 52, App	w	42,	49987,	152, A	8	Sequence 2, Appli	ω	12,	4	4, App	2	w	2,	: 13, App	14,	19,	18,	Sequence 20, Ap	Sequence 4, Appli

ALIGNMENTS

US-09-951-629-1

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APPLICANT: NAKAMURA, Toshikazu
TITLE OF INVENTION: Anti-Cancer Agent
FILE REFERENCE: 4373-0101P
CURRENT APPLICATION UNMBER: US/09/951,629
CURRENT FILING DATE: 2001-09-14
PRIOR FILING DATE: 1995-10-28
PRIOR FILING DATE: 1995-10-28
PRIOR FILING DATE: 1996-10-23
PRIOR FILING DATE: 1996-10-23
PRIOR FILING DATE: 1996-10-23
PRIOR FILING DATE: 1996-123
PRIOR FILING DATE: 1996-123
PRIOR FILING DATE: 1996-123
PRIOR FILING DATE: 1996-123
PRIOR FILING DATE: 1999-12-23
NUMBER OF SEQ ID NOS: 1
SECTWARE: Patentin version 3.1
SEQ ID NO 1
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Publication No. US20020004480A1
GENERAL INFORMATION:
                                                                                                                                               Best Local Sir
Matches 446;
                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                               TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                         LENGTH: 447
                                                                                                                                                                    Local Similarity
61 ARKQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQP
                                                                                       1 ERKRRUTIHEFKKSAKTTLIKIDPALKIKTKKVUTADQCAURCTRUKGLPFTCKAFVFDK
                                                                QRKRRNT1HEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDK
                                                                                                                                                 Conservative
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Pred. No. 1.1e-211;
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                                                                                                                                                                                     Length 447;
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Sequence 2, Application US/10081309
Publication No. US20030012775A1
GENERAL INFORMATION:
APPLICANT: HOSÉmann-La Roche Inc.
TITLE OF INVENTION: PEG Conjugates of NK4
FILE REFERENCE: 20859
CURRENT APPLICATION NUMBER: US/10/081,309
CURRENT FILING DATE: 2002-06-04
NUMBER OF SEQ ID NOS: 2
SOFTWARE: PatentIn version 3.1
SEQ ID NO 2
LENGTH: 447
TYPE: PRT
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US-10-081-309-2
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Best Local S
Matches 446
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               QYPHEHDMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSHGQDC
                                                                        YTLDPHTRWEYCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDS
                                                                                                                  MTCNGESYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWC
                                                                                                                                 MTCNGESYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWC
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QYPHEHDMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSHGQDC
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Pred. No. 1.1e-211;
1; Mismatches 0;
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US-10-872-198-120
, Sequence 120, Application US/10
; Publication No. US20050002897A1
; GENERAL INFORMATION:
; APPLICANT: Ulrich HAUPTS

US/10872198

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US-10-926-088A-1
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LENGTH: 494
TYPE: PRT
ORGANISM: Homo 9
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APPLICANT: NAKAMURA Toshikazu
APPLICANT: NATSUMOTO Kunio
APPLICANT: FUKUTA Kazuhiro
APPLICANT: FUKUTA Kazuhiro
TITLE OF INVENTION: A segment of glycosylation-deficient HGF alpha-chain
FILE REFERENCE: 2004-1328A/WMC/01736
CURRENT APPLICATION NUMBER: US/10/926,088A
CURRENT FILING DATE: 2004-08-26
NUMBER OF SEQ ID NOS: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
Matches 446; Conservat
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -10-926-088A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
OTHER INFORMATION:
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              CYTGNPLIPWDYCPISRCEGDTTPTIV
                                                                                                                                                                                                                                         MTCNGESYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWC
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                                                                     YRGNGKNYMGNLSQTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPW 420
                                                                                                                            QYPHEHDMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSHGQDC
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CYTGNPLIPWDYCPISRCEGDTTPTIV
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nilarity 99.8%;
Conservative
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Pred. No. 1.3e-211;
1; Mismatches 0;
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US-11-021-951-120
; Sequence 120, Application US/11021951
; Publication No. US20050175581A1
; GENERAL INFORMATION:
; APPLICANT: HAUDTS, Ulrich
; APPLICANT: KOLTERMANN, Andre
; APPLICANT: SCHEIDIG, Andreas
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CURRENT FILING DATE: 2004-06-18
PRIOR APPLICATION NUMBER: 60/543,518
PRIOR FILING DATE: 2004-02-11
PRIOR APPLICATION NUMBER: 60/524,960
PRIOR TILING DATE: 2003-11-25
PRIOR APPLICATION NUMBER: EP 04003058
PRIOR FILING DATE: 2004-02-11
PRIOR PPLICATION NUMBER: EP 03025871
PRIOR PPLICATION NUMBER: EP 03025871
PRIOR FILING DATE: 2003-11-11
PRIOR APPLICATION NUMBER: EP 03025851
PRIOR APPLICATION NUMBER: EP 03025851
PRIOR APPLICATION NUMBER: EP 03025851
PRIOR APPLICATION NUMBER: EP 03013819
PRIOR FILING DATE: 2003-11-10
PRIOR APPLICATION NUMBER: EP 03013819
PRIOR FILING DATE: 2003-66-18
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SEQ ID NO 120
LENGTH: 726
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APPLICANT: Andreas SCHEIDIG
APPLICANT: Christian VOETSMEIER
APPLICANT: Ulrich Kettling
TITLE OF INVENTION: NEW BIOLOGICAL ENTITIES
FILE REFERENCE: 04156.0002U4
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Pred. No. 2e-211;
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APPLICANT: VOTSMEIER, Christian
APPLICANT: Kettling, Ulrich
APPLICANT: COCO, Wayne Michael
ITILE OF INVENTION: Mew Biological Entities And The
ITILE OF INVENTION: And Diagnostic Use Thereof
FILE REFERENCE: 04156.0002U5
CURRENT APPLICATION NUMBER: US/11/021,951
CURRENT FILING DATE: 2004-12-22
PRIOR APPLICATION NUMBER: 10/872,198
PRIOR FILING DATE: 2004-06-18
PRIOR FILING DATE: 2004-06-18
PRIOR APPLICATION NUMBER: 60/543,518
PRIOR APPLICATION NUMBER: 60/543,518
PRIOR APPLICATION NUMBER: 60/524,960
PRIOR FILING DATE: 2004-02-11
PRIOR APPLICATION NUMBER: EP 04003058
PRIOR FILING DATE: 2003-11-25
PRIOR APPLICATION NUMBER: EP 03025871
PRIOR FILING DATE: 2003-11-11
PRIOR APPLICATION NUMBER: EP 03025851
PRIOR APPLICATION NUMBER: EP 03013819
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SOFTWARE: PatentIn ver
SEQ ID NO 120
LENGTH: 726
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Pred. No. 2e-211;
1; Mismatches
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RESULT 6
US-08-605-221-2
US-08-605-221-2
; Sequence 2, Application US/08605221
; Publication No. US20030060403A1
; GENERAL INFORMATION:
; APPLICANT: NAKAMURA, Toshikazu

```
APPLICANT: PFIZER INC.

APPLICANT: Hambor, John E.

APPLICANT: Roach, Marsha L.

TITLE OF INVENTION: GROWTH AND DIFFERENTIATION OF

FILE REFERENCE: PC25028A

CURRENT APPLICATION NUMBER: US/10/813,805

CURRENT FILLING DATE: 2004-03-30

PRIOR APPLICATION NUMBER: US 60/459,449

PRIOR APPLICATION NUMBER: US 60/459,449

PRIOR FILING DATE: 2003-03-31

NUMBER OF SEQ ID NOS: 48

SOFTWARE: Patentin version 3.2

SEQ ID NO 10

LENGTH: 728

TYPE: PAT

ORGANISM: Homo sapiens

US-10-813-805-10
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FILE REFERENCE: 2520-0101P
CURRENT APPLICATION NUMBER: US/08/605,221
CURRENT FILING DATE: 1996-03-15
NUMBER OF SEQ ID NOS: 4
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 2
LENGTH: 728
TYPE: PRT
ORGANISM: Homo sapiens
OTHER INFORMATION: HGF-A (Full length HGF)
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US-10-813-805-10
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                                                                                                                                                                                                                                                                                                      Sequence 10, Application US/10813805
Publication No. US20040191902A1
GENERAL INFORMATION:
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Best Local :
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Pred. No. 2e-211;
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APPLICANT: Gherardi, Ermanno
APPLICANT: Lietha, Daniel
APPLICANT: Lietha, Daniel
APPLICANT: Blundell, Thomas L
APPLICANT: Chirgadze, Dimitry Y
TITLE OF INVENTION: The NK1 Fragment of Hepatocyte Growth Factor/Scatter
TITLE OF INVENTION: Factor (HGF/SF) and Variants Thereof, and Their Use
FILE REFERENCE: 2502489-991180
CURRENT APPLICATION NUMBER: US/10/475,616
CURRENT FILING DATE: 2003-10-22
PRIOR APPLICATION NUMBER: OF/GB02/01941
PRIOR FILING DATE: 2002-04-29
PRIOR FILING DATE: 2001-04-27
NUMBER OF SEQ ID NOS: 2
SOFTWARE: PatentIn Ver. 2.1
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Best Local Similarity
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LENGTH: 728
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                                                                                            ERKRRNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDK
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1; Mismatches
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Pred. No. 2e-211;
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FILE REFERENCE: 14539-016051

CURRENT APPLICATION NUMBER: US/10/498,332

CURRENT FILING DATE: 2004-06-11

PRIOR APPLICATION NUMBER: PCT/JP02/13014

PRIOR FILING DATE: 2002-12-12

PRIOR APPLICATION NUMBER: JP 2002-352924

PRIOR FILING DATE: 2002-12-04

PRIOR FILING DATE: 2002-12-04

PRIOR APPLICATION NUMBER: JP 2001-380158

PRIOR APPLICATION NUMBER: JP 2001-380158

PRIOR FILING DATE: 2001-12-13

NUMBER OF SEQ ID NOS: 57

SOFTWARE: FASEUSEQ for Windows Version 4.0

SEQ ID NO 7

LENGTH: 728
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US-10-498-332-7
IS-9-498-332-7
; Sequence 7, Application US/10498332
; Publication No. US20050113284A1
; GENERAL INFORMATION:
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APPLICANT: Higuchi, Toshio
APPLICANT: Yamasaki, Yoshiki
APPLICANT: Orita, Takusa
TITLE OF INVENTION: PHARMACEUTICAL AGENTS AND METHODS FOR
TITLE OF INVENTION: TISSUE AND VASCULAR REGENERATION
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APPLICANT: Sim, Kim Lee
APPLICANT: Sim, Clara
APPLICANT: Day, Clara
TITLE OF INVENTION: Compositions and Methods for Inhibiting Endothelial Cell Prolifer
FILE REFERENCE: 05213-0592 43170-274540
CURRENT APPLICATION NUMBER: US/10/149,103A
CURRENT FILING DATE: 2003-05-06
PRIOR APPLICATION NUMBER: PCT/US00/34039
PRIOR FILING DATE: 2000-12-15
NUMBER OF SEQ ID NOS: 4
SOFTWARE: PatentIn version 3.1
SEQ ID NO 1
LENGTH: 727
TYPE: PRT
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Best Local S
Matches 438
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Local Similarity 98.2%;
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                                                       RGNGKNYMGNI.SQTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPWC
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Pred. No. 2.3e-208;
6; Mismatches 2;
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US-08-605-221-4
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US-10-926-088A-2
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Best Local Simi
Matches 441;
                                                                  Sequence 4, Application US/08605221
Publication No. US20030060403A1
GENERAL INFORMATION:
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APPLICANT: NAKAMURA, TOShİKAZU
TITLE OF INVENTION: THERAPEUTIC AGENT FO
FILE REFERENCE: 2520-0101P
CURRENT APPLICATION NUMBER: US/08/605,221
CURRENT FILING DATE: 1996-03-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: NAKAMURA Toshikazu
APPLICANT: MATSUMOTO Kunio
APPLICANT: PUKUTA Kazuhiro
TITLE OF INVENTION: A segment of glycosylation-deficient HGF alpha-chain
FILE REFERENCE: 2004-1328A/MMC/01736
CURRENT APPLICATION NUMBER: US/10/926,088A
CURRENT FILING DATE: 2004-08-26
NUMBER OF SEQ ID NOS: 6
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ORGANISM: Homo Sapiens
FEATURE:
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98.7%;
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Pred. No. 1.9e-208;
1; Mismatches 0; I
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; LENGTH: 723
; TYPE: PRT
; ORGANISM: Homo sapiens
; OTHER INFORMATION: HGF-B (five
US-08-605-221-4
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US-10-509-247A-20
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APPLICANT: Japan Sci
APPLICANT: Kuroda,
APPLICANT: Tanizawa
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SOFTWARE: PatentIn Ver.
SEQ ID NO 4
LENGTH: 723
                                                        SOFTWARE: PatentIn version 3.3 SEQ ID NO 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 20, Application US/10509247A Publication No. US20050181064A1
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                                                                                             CURRENT APPLICATION NUMBER: US/10/509,247A
CURRENT FILING DATE: 2004-09-28
PRIOR APPLICATION NUMBER: PCT/JP03/02602
PRIOR FILING DATE: 2003-03-05
PRIOR APPLICATION NUMBER: JP2002-97280
PRIOR APPLICATION NUMBER: JP2002-97280
PRIOR FILING DATE: 2002-03-29
NUMBER OF SEQ ID NOS: 20
                                                                                                                                                                                                                                             APPLICANT: Seno, Masaharu

APPLICANT: Tada, Hiroko

TITLE OF INVENTION: DRUG CONTAINING HOLLOW PROTEIN NANOPARTICLES OF PARTICLE-FORMING

TITLE OF INVENTION: PROTEIN, FUSED WITH DISEASE-TREATING TARGET-CELL-SUBSTANCE
                                                                                                                                                                                                                                     FILE REFERENCE: P023P01/US
                    LENGTH: 1109
TYPE: PRT
    ORGANISM:
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Kondo, Akihiko
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U-Wp-5240PCT

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RESULT 14
US-10-133-912-18
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; OTHER INFORMATION: Synthetic Construct
US-10-509-247A-20
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Publication No. US2002
GENERAL INFORMATION:
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Best Local Similarity 98.7
Matches 441; Conservative
COMPUTER READABLE FORM:

MEDIUM TYPE: 3 1/5 inch diskette
MEDIUM TYPE: 3 1/5 inch diskette
COMPUTER: PC'S LIMITED SYSTEM 200
OPERATING SYSTEM: WORD FOR WINDOWS
SOFTWARE: MICROSOFT WINDOWS 98
CURRENT APPLICATION NUMBER: US/10/133,912
APPLICATION NUMBER: US/10/133,912
FILING DATE: 25-Apr-2002
CLASSIFICATION - 25-Apr-2002
CLASSIFICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US/08/700,519
                                                                                                                                                                                           Ueda, Masatsugu
Higashio, Kanji
Yanushita, Yasushi
TITLE OF INVENTION: TCF MUTANT
NUMBER OF SEQUENCES: 25
CORRESPONDENCE ADDRESS:
ADDRESSSE: Burgess, Ryan and Wayne
STREET: 370 Lexington Avenue, Suite 21
CITY: NEW YORK
STATE: NEW YORK
COUNTRY: UNITED STATES OF AMERICA
                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
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                                                                                                                                                                                 ZIP: 10017
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No. US20020165358A1
                                                                                                                                                                                                                                                                                                                                                                                                     Kinosaki, Masahiko
Yamaguchi, Kyoji
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98.7%;
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Pred. No. 5e-208;
1; Mismatches
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US-10-133-912-19
Sequence 19, Application US/10133912
Publication No. US20020165358A1
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-683-8150
TELEPAX: 212-532-4285
INFORMATION FOR SEQ ID NO: 18:
SEQUENCE CHARACTERISTICS:
LENGTH: 723
LENGTH: 723
                                                                                                                                                                                                                              GENERAL
                                                                           Goto, Masaaki
Murakami, Akihiko
Weda, Masatsugu
Higashio, Kanji
Yamashita, Yasushi
TITLE OF INVENTION: TCF MUTANT
NUMBER OF SEQUENCES: 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
NAME: Wayne, Milton J.
REGISTRATION NUMBER: 17,906
                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                       366
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                                                                                                                                                                                                                                                                                                                                       PLIPWDYCPISRCEGDTTPTIV 447
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                STREET: 370 Lex
CITY: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                         KNYMGNLSQTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPWCYTGN
                               ADDRESSEE: Burgess, Ry
STREET: 370 Lexington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ESYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWCYTLDP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                            Kinosaki, Masahiko
                                                                                                                                                                                         Yamaguchi, Kyoji
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                                                Ryan and
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Pred. No. 2.26
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425

391 365 331 305 271 245 211 185

451

Wayne , Suite

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; STRANDEDNESS: SINGLE; TOPOLOGY: LINEAR SEQUENCE DESCRIPTION: SEQ ID NO: 19: US-10-133-912-19
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Search completed: October Job time: 243.355 secs
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/08/700,519
FILING DATE: 26-Aug-1996
ATTORNEY/AGENT INFORMATION:
NAME: Wayne, Milton J.
REGISTRATION NUMBER: 17,906
REFERENCE/DOCKET NUMBER: U-Wp-5240PCT
FELECOMMUNICATION INFORMATION:
TELEPHONE: 212-683-8150
TELEPHONE: 212-683-8150
TELEPAX: 212-532-4285
INFORMATION FOR SEQ ID NO: 19:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 97.5%; Score 2539.5; Best Local Similarity 97.8%; Pred. No. 3.2e-Matches 437; Conservative 1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/133,912
FILING DATE: 25-Apr-2002
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: UNITED STATES OF AMERICA
ZIP: 10017
COMPUTER READABLE FORM:
MEDIUM TYPE: 3 1/5 inch diskette
COMPUTER: PC'S LIMITED SYSTEM 200
OPERATING SYSTEM: WORD FOR WINDOWS
SOFTWARE: MICROSOFT WINDOWS 98
                                                                                                                                     387
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                                                                                      CYTGNPLIPWDYCPISRCEGDTTPTIV 447
                                                                                                                                                            YRGNGKNYMGNLSQTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPW 420
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                                                                      CYTGNPLIPWDYCPISRCEGDTTPTIV 473
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 seq length: 0
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1: /cgn2_6/ptodata/1/
2: /cgn2_6/ptodata/1/
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/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/1/iaa/backfiles1.pep:*
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US-08-460-890A-50
US-08-167-441C-50
US-08-167-971A-50
US-08-462-040-50
US-08-462-040-50
US-08-602-211-2
US-08-601-040A-27
US-09-601-040A-27
US-09-601-040A-8
US-07-838-410-1
US-08-290-937B-1
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US-08-1040A-10
US-08-1040A-10
US-09-601-040A-10
US-09-194-326-2
US-09-194-326-2
US-09-194-326-3
US-08-700-519J-19
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           Sequence 50, Appl
Sequence 50, Appl
Sequence 50, Appl
Sequence 20, Appl
Sequence 21, Appl
Sequence 22, Appl
Sequence 27, Appl
Sequence 27, Appl
Sequence 6, Appl
Sequence 6, Appl
Sequence 1, Appl
Sequence 3, Appl
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ALIGNMENTS

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US-08-460-890A-50

Sequence 50, Application US/08460890A
Patent No. 5994109

GENERAL INFORMATION:
APPLICANT: Woo, Savio L.C.
APPLICANT: Woo, Savio L.C.
APPLICANT: Woo, Savio L.C.
APPLICANT: Gottchalk, Stephen
TITLE OF INVENTION: MCTHOR OF USE
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
COUNTRY: U.S.A.
COUNTRY: U.S.A.
COUNTRY: U.S.A.
COUNTRY: U.S.A.
COUNTRY: U.S.A.
COUNTRY: U.S.A.
MEDIUM TYPE: Storage
COMPUTER READABLE FORM:
MEDIUM TYPE: Storage
COMPUTER: IBM P.C. DOS 5.0
SOFTWARE: FastSEQ for Windows 2.0
CURRENT APPLICATION NUMBER: US/08/460,890A
FILING DATE: June 5, 1995
CLASSIFICATION UNMBER: US/08/460,890A
FILING DATE: December 14, 1993
APPLICATION NUMBER: 08/167,641
FILING DATE: March 20, 1992
APPLICATION NUMBER: 907/855,389
FILING DATE: March 20, 1993
APPLICATION NUMBER: 32,327
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RESULT 2
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Patent No. 6033884
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Best Local Similarity
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                                             COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44
MEDIUM TYPE: storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5
SOFTWARE: FastSEQ for Windows 2.
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/167,64
FILING DATE: December 14, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL
                                                                                                                                                                                                                                                                                                        APPLICANT: Woo, Savio L.C.
APPLICANT: Smith, Louis C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gottchalk, Stephen
TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS
TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
CORRESPONDENCE ADDRESS:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                  ADDRESSEE: Lyon & Lyon STREET: 633 West Fifth STREET: Suite 4700 CITY: Los Angeles STATE: California COUNTRY: U.S.A. ZIP: 90071-2066
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99.8%;
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    Mismatches

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                                             GENERAL INFORMATION:

APPLICANT: Woo, Savio L.C.

APPLICANT: Smith, Louis C.

APPLICANT: Cristiano, Richard

APPLICANT: Gottchalk, Stephen

TITLE OF INVENTION: NUCLEIC A

TITLE OF INVENTION: METHODS O

NUMBER OF SEQUENCES: 65

CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                    Sequence 50, Application US/08460971A Patent No. 6150168
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Best Local (
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TELEFAX: (213) 955-044
TELEX: 67-3510
INFORMATION FOR SEQ ID NO:
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MOLECULE TYPE:
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LENGTH: 697 amino acids
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APPLICATION NUMBER: PCT/US93/02725
FILING DATE: March 19, 1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION: TELEPHONE: (213) 489-1600
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REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 20
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               STREET:
                                   ADDRESSEE:
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               3: Lyon & Lyon
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Pred. No. 2.7e-214;
1; Mismatches 0;
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Length 697;

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US-08-460-971A-50
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Best Local Similarity 99.8%;
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APPLICATION NUMBER: US/08/460,971A FILING DATE: June 5, 1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/167,641
APPLICATION NUMBER: 08/167,641
FILING DATE: December 14, 1993
APPLICATION NUMBER: 07/855,389
FILING DATE: MATCh 19, 1993
APPLICATION NUMBER: PCT/US93/02725
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INFORMATION FOR SEQ ID NO: 5
SEQUENCE CHARACTERISTICS:
LENGTH: 697 amino acids
TYPE: amino acids
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MEDIUM TYPE: 3.5" Diskette,
MEDIUM TYPE: storage
MEDIUM TYPE: Storage
COMPUTER: IBM Compatible
COMPUTER: IBM Compatible
COPERATING SYSTEM: IBM P.C.
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TELEPHONE: (213) 489-1600
TELEPAX: (213) 955-0440
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REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 212/063
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APPLICANT: Woo, Savio L.C.
APPLICANT: Grith, Louis C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gottchalk, Stephen
ITILE OF INVENTION: NUCLEIC ACID TRAI
TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 50, Application US/08462040 Patent No. 6177554
                                                                                                                                                                                                                                                                 Matches 446;
                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STATE: California
COUNTRY: U.S.A.
ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: Storage
COMPUTER: IBM Compatible
COMPUTER: IBM Compatible
COMPUTER: IBM Compatible
COMPUTER: IBM Compatible
COMPUTER: IBM COMPATION
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: FASTLSEQ for Windows 2.0
CURRENT APPLICATION NUMBER: US/08/462,040
FILING DATE: June 5, 1995
CLASSIFICATION DATA:
APPLICATION NUMBER: 08/167,641
APPLICATION NUMBER: 08/167,641
APPLICATION NUMBER: 07/855,389
FILING DATE: March 20, 1992
APPLICATION NUMBER: PCT/US93/02725
APPLICATION NUMBER: PCT/US93/02725
APPLICATION NUMBER: PCT/US93/02725
APPLICATION NUMBER: 32,327
REGISTRATION NUMBER: 32,327
REGISTRATION NUMBER: 212/078
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INFORMATION FOR SEQ ID NO:
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TOPOLOGY: linear
MOLECULE TYPE: pep
                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 697 amino acids
TYPE: amino acid
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TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
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STREET: 633 West Fifth
STREET: Suite 4700
CITY: Los Angeles
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MTCNGESYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWC
                                       WSSMIPHEHSFLPSSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVEC
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Pred. No. 2.7e-214;
1; Mismatches 0;
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MOLECULE TYPE: protein
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US-07-815-333A-2
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Best Local Similarity
Matches 446; Conserv
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GENERAL INFORMATION:
APPLICANT: Nakamura, Toshikazu
APPLICANT: Matsumoto, Kunio
TITLE OF INVENTION: EPITHELIOCYTE GROWTH ACCELERATOR
TITLE OF INVENTION: 2
                                                                                                                                                                                                                                                                                 TELEFAX: (312) 616-570
TELEX: 25-3533
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                          FILING DATE: 19911227
CLASSIFICATION: 530
ATTORNEY, AGENT INFORMATION:
NAME: Green, Robert F.
REGISTRATION NUMBER: 27555
REFERENCE/DOCKET NUMBER: 4406
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 728 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
ADDRESSEE: Leydig, Voit & May,
STREET: Two Prudential Plaza,
                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/815,333A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                TELEPHONE: (312) 616-5700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                       CYTGNPLIPWDYCPISRCEGDTTPTIV 447
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                                ARKQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQP 120
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                ARKQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQP
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                                                                                                                             Score 2601; DB 1; L
Pred. No. 2.9e-214;
Pred. No. 2.9e-214;
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Best Local Similarity Matches 446; Conserv
                           Query Match
                                                                                                                                                                                                               APPLICATION UNMBER: US/08/087,783A
FILING DATE: 13.Jul-1993
CLASSIFICATION 1435
PRIOR APPLICATION DATA:
APPLICATION UNMBER: 07/884811
FILING DATE: 18-MAY-92
PRIOR APPLICATION NUMBER: 07/885971
FILING DATE: 18-MAY-92
APPLICATION NUMBER: 07/885971
APPLICATION NUMBER: 07/885971
FILING DATE: 18-MAY-92
ATTORNEY/AGENT INFORMATION:
NAME: Marschang, Diane L.
REGISTRATION NUMBER: 35,600
REGISTRATION NUMBER: 35,600
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                                                                                                               TELEFAX: 415/952-9881
TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                             REFERENCE/DOCKET NUMBER: PO
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-5416
TELEPEAX: 415/952-9881
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CITY: South San Francisco
STATE: California
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COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WinPatin (Genentech)
CURRENT APPLICATION DATA:
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Score 2601; DB 1;
Pred. No. 2.9e-214;
1; Mismatches 0;
                                           Length 728;
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Sequence 2, Application US/08605221

Patent No. 669987

GENERAL INFORMATION:

APPLICANT: NAKAMURA, Toshikazu

TITLE OF INVENTION: THERAPEUTIC AGENT FOR DISORDER IN BRAIN AND NERVE

FILE REFERENCE: 2520-0101P

CURRENT APPLICATION NUMBER: US/08/605,221

CURRENT FILING DATE: 1996-03-15

NUMBER OF SEQ ID NOS: 4

SOFTWARE: Patentin Ver. 2.1

SEQ ID NO 2

LENGTH: 728

TYPE: PRT

ORGANISM: Homo sapiens

OTHER INFORMATION: HGF-A (Full length HGF)

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Pred. No. 2.9e-214;
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RESULT
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GENERAL INFORMATION:

APPLICANT: MEDICO, Enzo et al.

APPLICANT: MEDICO, Recombinant Proteins from HG

FILE REFERENCE: 0471-0161P

CURRENT APPLICATION NUMBER: US/09/601,040A

CURRENT FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 28

SOFTWARE: Patentin version 3.0

SEQ ID NO 27
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US-09-601-040A-27
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TYPE: PRT
ORGANISM: Homo sapiens
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                CYTGNPLIPWDYCPISRCEGDTTPTIV
                                                                             YRGNGKNYMGNLSOTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPW
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98.7%;
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Pred. No. 2.8e-211;
1; Mismatches 0;
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Sequence 6, Application US/09601040A

Patent NO. 6730657

GENERAL INFORMATION:

APPLICANT: MEDICO, Enzo et al.

TITLE OF INVENTION: Recombinant Proteins from HGF and MSF
FILE REFERENCE: 0471-0161P

CURRENT APPLICATION UNMERE: US/09/601,040A

CURRENT FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 28

SOFTWARE: PatentIN version 3.0

SEQ ID NO 6

LENGTH: 717
CURRENT APPLICATION NUMBER: US/09/601,040A
CURRENT FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 28
SOFTWARE: PatentIn version 3.0
SEQ ID NO 8
SEQ ID NO 8
LENGTH: 717
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
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US-09-601-040A-8
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                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: MEDICO, Enzo et al.
TITLE OF INVENTION: Recombinant Proteins
FILE REFERENCE: 0471-0161P
                                                                                                                                                                                                                     Sequence 8, Application Patent No. 6730657
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Best Local Similarity
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ORGANISM: Artificial Sequence
FEATURE:
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98.7%;
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Pred. No. 4.6e-211;
1; Mismatches 0;
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RESULT 11
US-07-838-410-1
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APPLICANT: SHIMA, NOBUYUKI
APPLICANT: HIGASHIO, KANJI
APPLICANT: NAGAO, MASAYA
                                                      ZIP: 22201
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                               APPLICANT: OOGAKI, FUMIKO
APPLICANT: TAKAOKA, HIROAKI
APPLICANT: TSUDA, EISUKE
TITLE OF INVENTION: PLASMIDS CONTAINING DNA ENCODING THE
TITLE OF INVENTION: PLASMIDS CONTAINING DNA ENCODING THE
TITLE OF INVENTION: PLASMIDS, AND PRODUCTION MEDTHOD OF BIOLOGICALLY ACTIVE
TITLE OF INVENTION: SUBSTANCE USING THE TRANSFORMED CELLS
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
PRIOR APPLICATION DATA:
              APPLICATION NUMBER: UFILING DATE: 19920311 CLASSIFICATION: 435
                                                                                                                                                      COUNTRY: U
                                                                                                                                                                                                   STREET: 2200 CL
CITY: ARLINGTON
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STREET: 2200 CLARENDON
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98.7%;
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Pred. No. 4.6e
1; Mismatches
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l. No. 4.6e-211;
fismatches 0;
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INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 723 amino acids
TYPE: AMINO ACID
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 441;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: WHITE, JOHN L.
REGISTRATION NUMBER: 17,746
REFERENCE/DOCKET NUMBER: WAN
TELECOMMUNICATION INFORMATION:
TELEPHONE: 703-243-6333
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MOLECULE TYPE:
ORIGINAL SOURCE:
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NAME/KEY:
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LOCATION: 605..623
OTHER INFORMATION: /
OTHER INFORMATION: {
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LOCATION: 490..505
OTHER INFORMATION:
OTHER INFORMATION:
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LOCATION: 393..405
OTHER INFORMATION: OTHER INFORMATION:
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FILING DATE: 15-JUL-1991
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CYTGNPLIPWDYCPISRCEGDTTPTIV 447
                                                                                            QYPHEHDMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSHGQDC
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                                                 YRGNGKNYMGNLSQTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPW
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98.7%;
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SEQUENCE IN ALPHA-CHAIN"
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SEQUENCE IN BETA-CHAIN"
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Pred. No. 4.7e-211;
1; Mismatches 0;
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US-08-290-937B-1
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                                                                                                                                                                                                                                                                                       Query Match
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/290,9371
FILING DATE: 19-AUG-1994
CLASSIFICATION: 530
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                                                                                                                                                                                                                                                                                                                                 STRANDEDNESS: single TOPOLOGY: linear MOLECULE TYPE: protein
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APPLICANT:
APPLICANT:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 248-7000
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NAME: CAMPBELL, PAULA A.
REGISTRATION NUMBER: 32,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: Testa, Hurwitz & Thibeault
STREET: 125 High St.
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APPLICANT:
APPLICANT:
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TITLE OF INVENTION: MODIFIED
NUMBER OF SEQUENCES: 13
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CITY: Boston
                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 723 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                        Local Similarity
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                                                                                                                                          61 ARKOCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQP 120
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                  MTCNGESYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWC
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MASUNAGA, HIROAKI
TAKAHIRA, REIKO
OOGAKI, FUMIKO
UEDA, MASATSUGU
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GOTO, MASAAKI
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98.7%;
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                                                            SYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVEC
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Pred. No. 4.7e-211;
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US-08-290-937B-2
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                                                                          Query Match
Best Local Similarity
                                                              Matches 441;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: YAMAĞUCHI, KYOJI
APPLICANT: SHIMA, NOBUYUKI
APPLICANT: SHIMA, NOBUYUKI
APPLICANT: MURAKAMI, AKIHIKO
APPLICANT: TSUDA, EISUKE
APPLICANT: TSUDA, EISUKE
APPLICANT: TAKAHIRA, REIKO
APPLICANT: TAKAHIRA, REIKO
APPLICANT: UEDA, MASATSUGU
APPLICANT: UEDA, MASATSUGU
APPLICANT: UEDA, MASATSUGU
APPLICANT: UEDA, MASATSUGU
APPLICANT: HEASHIO, KANJI
TITLE OF INVENTION: MODIFIED TCF
NUMBER OF SEQUENCES: 1
                                                                                                                                                                                                              TELEPHONE: (617) 248-7000
TELEFAX: (617) 248-7100
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
NAME: CAMPBELL, PAULA A.
REGISTRATION UNMBER: 32,503
REFERENCE/DOCKET NUMBER: FJ
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                       LENGTH: 723 amino acids
TYPE: amino acid
STRANDENESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC COMpatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version
CURRENT APPLICATION DATA:
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125 High St.
                                                                Conservative
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                                                                            98.4%;
98.7%;
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                                                           Score 2563.5; DB 1;
Pred. No. 4.7e-211;
Mismatches 0;
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US-08-404-643-1
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                             TOPOLOGY: 11
                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 723 amino acids
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CITY: BOSTON
STATE: MA
                                                              STRANDEDNESS:
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COUNTRI:
2IP: 02109
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/404,643
FILING DATE: 15-MAR-1995
CLASSIFICATION: 436
ATTORNEY/AGENT INFORMATION:
NAME: CAMPBELL, PAULA A
REGISTRATION NUMBER: 32,503
REFERENCE/DOCKET NUMBER: FJN-034 (3999/35)
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION 10FORMATION:
TELECOMMUNICATION 10FORMATION:
TELEPHONE: (617)-248-7000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: HIGASHIO, KANJI
APPLICANT: SHIMA, NOBUYUKI
APPLICANT: OGGAKI, FUMIKO
TITLE OF INVENTION: MONOCLONAL ANTIBODY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: PATENT ADMINISTRATOR, TESTA,
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Sequence 1, Application US/09194326
Patent NO. 6306827
Patent NO. 6306827

GENERAL INFORMATION:
APPLICANT: Kinosaki, Masahiko
APPLICANT: Konosaki, Hiromi
APPLICANT: Kobayashi, Fumie
APPLICANT: Kobayashi, Fumie
APPLICANT: Higashio, Kanji
APPLICANT: Higashio, Kanji
TITLE OF INVENTION: Agent for Preventing and/or Tre
FILE REFERENCE: FJN-069
CURRENT APPLICATION NUMBER: US/09/194,326
CURRENT FILING DATE: 1998-11-24
EARLIER FILING DATE: 1998-3-20
EARLIER REPLICATION NUMBER: PTJ-98901221
EARLIER FILING DATE: 1997-03-28

NUMBER: OF COTT NOTE: 1997-03-28
                                                                                                           NUMBER OF SEQ ID NOS: 3
SOFTWARE: PATENTIN Ver. 2.0
SEQ ID NO 1
LENCTH: 723
TYPE: PRT
ORGANISM: Homo sapiens
FEATURE:
OTHER INFORMATION: TCF-II
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Best Local Similarity 98.7%;
Matches 441; Conservative
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                                                          Conservative
                                                                   98.4%;
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Pred. No. 4.7e-211;
1; Mismatches 0;
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. No. 4.7e-211;
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ALIGNMENTS

hepatocyte growth factor precursor [validated] - N;Alternate names: hepapoietin A; scatter factor

human

A; Recession: A41140; ROLL. 137373, FILL. 137374, A; Recession: A41140; ROLL. 137374, A; Rolecule type: mRNA
A; Residues: 1-728 < WEI>
A; Cross-references: GB.M73239; NID:g337935; PIDN:AAA64239.1; PID:g337936
A; Cross-references: GB.M73239; NID:g337935; PIDN:AAA64239.1; PID:g337936
A; Cross-references: GB.M73239; NID:g337935; PIDN:AAA64239.1; PID:g337936
A; Cross-reference number: A36677; MUID:g1025062; PMID:g145836
A; Reference number: A36677; MUID:g1025062; PMID:2145836
A; Residues: 1-728 < SE3>
A; Cross-references: GB:M60718; NID:g184031; PIDN:AAA52648.1; PID:g184032
A; A; Residues: 1-161,167-728 < SE4>
A; Cross-references: GB:M60718; NID:g184031; PIDN:AAA52648.1; PID:g184032
A; Cross-references: EMBL:X16323
A; Experimental source: leukocyte
R; Miyazawa, K.; Tsubouchi, H.; Naka, D.; Takahashi, K.; Okigaki, M.; Arakaki, N.; Nakay:
Biochem. Biophys. Res. Commun. 163, 967-973, 1989
A; Title: Molecular cloning and sequence analysis of cDNA for human hepatocyte growth face, Reference number: A33512; MUID:89392017; PMID:2528952
A; Accession: A33512
A; Scatus: not compared with conceptual translation
A; Residues: 1-728 < MIY> A;Residues: 1-481,'RT',484-728 <SE2>
R;Weidner, K.M.; Arakaki, N.; Hartmann, G.; Vandekerckhove, J.; Weingart, S.; Rieder, Proc. Natl. Acad. Sci. U.S.A. 88, 7001-7005, 1991
A;Title: Evidence for the identity of human scatter factor and human hepatocyte growth A;Reference number: A41140; MUID:91334393; PMID:1831266 A;Cross-references: UNIPROT:P14210; DDBJ:D90318 A;Note: the authors translated the codon GAA for R;Seki, T., Hagiya, M.; Shimonishi, M.; Nakamura, submitted to JIPID, March 1991 A;Title: Organization of the human hepatocyte growth factor-encoding gene A;Reference number: JH0579; MUID:91340155; PMID:1831432 A;Accession: JH0579 C;Species: Homo sapiens (man)
C;Date: 17-Aug-1992 #sequence_revision 17-Aug-1992 #text_change 09-Jul-2004
C;Date: 17-Aug-1992 #sequence_revision 17-Aug-1992 #text_change 09-Jul-2004
C;Accession: JH0579; JU0333; Ā41140; B36677; A33677; A33512; A39006; PH0114; A37796; S06
R;Seki, T.; Hagiya, M.; Shimonishi, M.; Nakamura, T.; Shimizu, S. A; Molecule type: DNA A; Residues: 1-728 <SEK> A; Reference number: JU0333 A; Molecule type: DNA A; Accession: JU0333 A;Description: Organization of the human hepatocyte growth factor-encoding gene 213-219, 1991 M.; Nakamura, residue 662 as , T.; Shimizu, S human hepatocyte growth

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PLMS 146260 B30848 PLBO PLHU T18518 S00657 A32869 B61545 A61545

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A;Residues: 86.91;329.344;356-363,'XX',366-370;425-434;442-447,'X',449-450;543-546,'X',R;Nakamura, T.; Nishizawa, T.; Hagiya, M.; Seki, T.; Shimonishi, M.; Sugimura, A.; Tael Nature 342, 440-443, 1989
A;Title: Molecular cloning and expression of human hepatocyte growth factor.
A;Reference number: S06794; MUID:90066676; PMID:2531289
A;Accession: S06794
A;Description: stimulates mitosis of hepatocytes and other A;Note: does not have proteinase activity C;Superfamily: hepatocyte growth factor/macrophage stimulates
                                                                                                            A;Map position: 7q21.1-7q21.1
A;Introns: 30/1, B5/2; 123/1; 161/2; 209/1; 249/2; 289/1; C;Complex: disulfide-bonded heterodimer of chains derived C;Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: EMBL:X57574; NID:g32083; PIDN:CAA40802.1; PID:g32084 R;Shima, N.; Nagao, M.; Ogaki, F.; Tsuda, E.; Murakami, A.; Higashio, K. Biochem. Biophys. Res. Commun. 180, 1151-1158, 1991 A;Title: Tumor cytotoxic factor/hepatocyte growth factor from human fibr A;Reference number: I52253; MUID:92062058; PMID:1835383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: GB:L02931; NID:g184033; PIDN:AAA52649.1; PID:g184034 R;Miyazawa, K.; Kitamura, A.; Naka, D.; Kitamura, N. Eur. J. Biochem. 197, 15-22, 1991 A;Title: An alternatively processed mRNA generated from human hepatocyte A;Reference number: S15443; MUID:91200041; PMID:1826653 A;Accession: S15443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Note: the authors translated the codon CAG for residue 727 as Glu A;Note: part of this sequence, including the amino end of both the alpha and beta R;Hartmann, G.; Naldini, L.; Weidner, K.M.; Sachs, M.; Vigna, E.; Comoglio, P.M.; Proc. Natl. Acad. Sci. U.S.A. 89, 11574-11578, 1992
A;Title: A functional domain in the heavy chain of scatter factor/hepatocyte growth.
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A;Residues: 32-43;53-58 <YOS>
A;Residues: 32-43;53-58 <YOS>
A;Resperimental source: plasma
R;Weidner, K.M.; Behrens, J.; Vandekerckhove, J.; Birchmeier, W.
J. Cell Biol. 111, 2097-2108, 1990
A;Title: Scatter factor: molecular characteristics and effect on A;Reference number: A37796; MUID:91035621; PMID:2146276
A;Recession: A37796
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A;Title: Identification of the N-terminal residue of the heavy chain of both native A;Reference number: PH0114; MUID:91207365; PMID:1826837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Cross-references: GB:M29145; NID:g184041; PIDN:AAA52650.1; PID:g306846 R;Rubin, J.S.; Chan, A.M.L.; Bottaro, D.P.; Burgess, W.H.; Taylor, W.G.; Proc. Natl. Acad. Sci. U.S.A. 88, 415-419, 1991 A;Title: A broad-spectrum human lung fibroblast-derived mitogen is a vari A;Reference number: A39006; MUID:91110540; PMID:1824873
                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: mRNA
A; Residues: 161-166 <
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A;Status: preliminary; translated
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A; Residues: 1-288, 'ET' <MIY2>
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A;Residues: 1-31,'HK',34-77,'N',79-292,'V',294-299,'M',301-316,'A',318-335,'K',337-386,
A;Cross-references: EMBL:X16323; NID:g32081; PIDN:CAA34387.1; PID:g32082
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A; Residues: 1-161,167-728 < RUB>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Experimental source: liver
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   factor/macrophage stimulating protein
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F:495-728/Domain: beta chain #status experimental <BCH>
F:495-716/Domain: trypsin homology <TRY>
F:495-716/Domain: trypsin homology <TRY>
F:32/Modified site: pyrrolidone carboxylic acid (Gln) (in mature form) #status experiment F:32/Modified site: carboxydrate (Asn) (covalent) #status predicted F:487-604/Disulfide bonds: #status predicted
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                                                                                                                                                                                                                                                                                                                                                                   hepatcoyte growth factor precursor - mouse
N;Alternate names: hepapoietin A; scatter factor
C;Species: Mus musculus (house mouse)
C;Date: 03-Mar-1993 #sequence revision 26-May-1994 #text_change 09-Jul-2004
C;Accession: JC2117; Pc2064; A60185; S43416; S45521; S17173; S10966; I48758; JU0231
R;Sasaki, M.; Nishio, M.; Sasaki, T.; Enami, J.
Biochem. Biophys. Res. Commun. 199, 772-779, 1994
                                                                                                                    A;Molecule type: mRNA
A;Residues: 1-728 <SAS2>
A;Cross-references: UNIPROT:008048; GB:D10212;
A;Experimental source: fibroblast, COS-1 cell
A;Note: submitted to JIPID, May 1993
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R;Rosen,
                      A; Molecule type: protein
A; Residues: 496-504 <SA2>
                                                                                       A; Accession: PC2064
                                                                                                                                                                                                                                                                            A;Reference number: JC2117; MUID:94183257; PMID:8135822 A;Accession: JC2117
                                                                                                                                                                                                                                                                                                                                            Biochem. Biophys. Res. Commun. 199, 772-779, 1994
A; Title: Identification of mouse mammary fibroblast-derived mammary
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1; Mismatches 0;
(F)
Vinter,
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   Goldberg,
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Biol.

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A;Molecule type: protein
A;Residues: 496-507, 'X', 509-512, 'L', 514-516, 'X', 518-519 < NAT>
A;Residues: 496-507, 'X', 509-512, 'L', 514-516, 'X', 518-519 < NAT>
A;Residues: 496-507, 'X', 509-512, 'L', 514-516, 'X', 518-519 < NAT>
A;Residues: 496-507, 'X', 509-512, 'L', 514-516, 'X', 518-519 < NAT>
A;Residues: 496-507, 'X', 509-512, 'L', 514-516, 'X', 518-519 < NAT>
A;Residues: 270, 830-836, 1995

A;Title: Characterization of the scatter factor/hepatocyte growth factor gene promoter.
A;Title: Characterization of the scatter factor/hepatocyte growth factor gene promoter.
A;Accession: 148758; MUID:95122532; PMID:7822318
A;Accession: 148758; MUID:95122532; PMID:7822318
A;Accession: 148758; MUID:95122532; PMID:7822318
A;Accession: 148758; MUID:95122532; PMID:7822366.1; PID:9673452
C;Complex: disulfide-bonded heterodimer of chains derived from the same precursor C;Function:
A;Residues: 1-30 < RESS
A;Residues: 1-30 < RESS
A;Residues: disulfide-bonded heterodimer of chains derived from the same precursor C;Function:
C;Complex: disulfide-bonded heterodimer of chains derived from the same precursor C;Function:
C;Complex: disulfide-bonded heterodimer of chains derived from the same precursor C;Function:
C;Complex: disulfide-bonder of chains derived from the same precursor C;Function:
C;Complex: disulfide-bonder of chains derived from the same precursor C;Function:
C;Complex: disulfide-bonder of chains derived from the same precursor C;Function:
C;Complex: disulfide-bonder of chains derived from the same precursor C;Function:
C;Complex: disulfide-bonder of chain #status predicted <ACH>
F;312-70/Domain: kringle homology <KR2>
F;314-70/Domain: kringle homology <KR2>
F;315-71/Domain: kringle homology <KR2>
F;316-71/Domain: kringle homology <KR2>
F;316-71/Domain: kringle homology <KR2>
F;317-71/Domain: kringle homology <KR2>
F;318-71/Domain: kringle homology <KR2>
F;319-71/Domain: kringle homology <KR2>
F;319-71/Domain: kringle homology <KR2>
F;319-71/Domain: kringle homology <KR2>
F;319-71/Domain: kringle homology <KR2
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A,Accession: S45521
A;Status: nrelicit
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R;Coffer, A.; Fellows, J.; Young, S.; Pappin, D.; Rahman, D.
Biochem. J. 278, 35-41, 1991
A;Title: Purification and characterization of biologically active
A;Reference number: S17173; MUID:91354223; PMID:1831975
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A;Status: prelimina
A;Molecule type: pr
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A; Residues: 'X', 184-188, 'KX', 191-192, 'X', 194, 'XX', 197;357-364, 'XX', 367;375-377, 'E'
R; Liu, Y.; Michalopoulos, G.K.; Zarnegar, R.
Biochim. Biophys. Acta 1216, 299-303, 1993
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A, Reference number: S10966; MUID:90326152; PMID:2142751
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A;Residues: 496-517,'T',519 <COP>
R;Gherardi, E.; Stoker, M.
Nature 346, 228, 1990
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A; Residues: 1-563, 'H',
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A; Residues: 1-728 <LIU>
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                                                                                                                                                                        Query Match
Best Local (
                                                                                                                                                                                                                                                                                                           33/Modified site: pyrrolidone carboxylic acid (Gln) (in mature form) #status 295,403,569,656/Binding site: carbohydrate (Asn) (covalent) #status predicted
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QKKRRNTLHEFKKSAKTTLTKEDPLLKIKTKKVNSADECANRCIRNRGFTFTCKAFVFDK
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Pred. No. 9.9e-162;
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                                                                                                                                                                                                      DB 1;
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CYTGNPLIPWDYCPISRCEGDTTPTIV
                    CYTGNPLIPWDYCPISRCEGDTTPTIV 442
                                                                                                                            QYPHKHDITPENFKCKDLRENYCRNPDGAESPWCFTTDPNIRVGYCSQIPKCDVSSGQDC
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A;Cross-references: UNIPROT:D17945; GB:D:A;Note: the authors translated the codon R;Okajima, A.; Miyazawa, K.; Kitamura. N. C;Date: 28-Sep-1990 #sequence_revision 18-Nov-1992 #text_change 09-C;Accession: A35644; S13211
R;Tashiro, K.; Hagiya, M.; Nishizawa, T.; Seki, T.; Shimonishi, M.; Proc. Natl. Acad. Sci. U.S.A. 87, 3200-3204, 1990
A;Title: Deduced primary structure of rat hepatocyte growth factor A;Reference number: A35644; MUID:90222197; PMID:2139229
A;Accession: A35644 A;Status: preliminary A;Molecule type: mRNA A;Residues: 1-728 <TAS> hepatocyte growth factor precursor - rat N;Alternate names: hepapoietin A; scatter factor C;Species: Rattus norvegicus (Norway rat) A35644 GB:D90102; GB:M32987; NID:g220766; PIDN:BAA14133.1; codon GAG for residue 70 as Gln, GAC for residue 417 z T.; Shimonishi, M.; Shimizu, 09-Jul-2004 and expression s : Nakamu of.

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Eur. J. Blochem. 193, 375-381, 1990
A;Title: Primary structure of rat hepatocyte growth factor A;Reference number: S13211; MUID:91031482; PMID:2146117
A;Accession: S13211
A;Status: preliminary

and

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its mRNA

A; Molecule type: mRNA A; Residues: 1-728 < OKA>

A;Cross-references: EMBL:X54400; NID:g56353; PIDN:CAA38266.1; PID:g4539554 C;Complex: disulfide-bonded heterodimer of chains derived from the same pr C;Function: precursor

protein 1; kringle homolo heterodimer; kringle; pyr

A;Description: stimulates mitosis of hepatocytes and other cells
A;Note: does not have proteinase activity
C;Superfamily: hepatocyte growth factor/macrophage stimulating protein 1; kringle hc
C;Keywords: alternative splicing; glycoprotein; growth factor; heterodimer; kringle.
F;1-32/Domain: signal sequence #status predicted <SIG>
F;56-495/Droduct: hepatocyte growth factor #status predicted <MAT>
F;56-495/Drodain: hepatocyte growth factor alpha chain #status predicted <ACH>
F;129-207/Domain: kringle homology <KR1>
F;129-207/Domain: kringle homology <KR2>
F;306-384/Domain: kringle homology <KR3>
F;302-470/Domain: kringle homology <KR4>
F;392-470/Domain: kringle homology <KR4>
F;496-719/Domain: kringle homology <KR4>
F;496-719/Domain: trypsin homology <TRY>
F;33/Modified site: pyrrolidone carboxylic acid (Gln) (in mature form) #status predicted
F;498-607/Disulfide bonds: #status predicted
F;488-607/Disulfide bonds: #status predicted predicte

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Gaps

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A;Note: does not have proteinase activity
C;Superfamily: hepatocyte growth factor/macrophage stimulating protein 1; k
C;Keywords: duplication; glycoprotein; growth factor; heterodimer; kringle
F;42-477,478-709/Product: hepatocyte growth factor #status predicted <ANT>
F;42-477/Domain: hepatocyte growth factor alpha chain #status predicted <AC
F;115-193/Domain: kringle homology <KR1>
F;198-367/Domain: kringle homology <KR2>
F;289-367/Domain: kringle homology <KR3>
F;375-453/Domain: kringle homology <KR3>
F;375-453/Domain: kringle homology <KR3>
F;478-709/Domain: hepatocyte growth factor beta chain #status predicted <BC
F;478-709/Domain: trypsin homology <TRY>
F;52,128,281,322,379,550,637,666/Binding site: carbohydrate (Asn) (covalent F;470-588/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    hepatocyte growth factor precursor - clawed frog
N;Alternate names: hepapoietin A; scatter factor
C;Species: Xenopus sp. (clawed frog)
C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change
C;Accession: I51283
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                                                                                                                                                                                                                                                                                                                                                                   A;Status: preliminary; translated A;Molecule type: mRNA A;Residues: 1-710 <NAK>
                                                                                                                                                                                                                                                                                                                                                                                                                            Mech. Dev. 49, 123-131, 1995
A;Title: Molecular cloning of Xenopus HGF cDNA and its
A;Reference number: I51283; MUID:95267690; PMID:7748783
A;Accession: I51283
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3; Mismatches 20;
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                                                                                                                                                                                                                                                                                                                                A;Cross-references: UNIPROT:Q90978; GB:S77480; NID:g998675; PID:g998676 C;Superfamily: hepatocyte growth factor/macrophage stimulating protein i F;124-197/Domain: kringle homology <KRG> F;202-279/Domain: kringle homology <KR2> F;296-374/Domain: kringle homology <KR3>
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A;Molecule type: mRNA
A;Residues: 1-411 <STR>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMIPHEHS-----YRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVECMT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQPWS
                                                         SMIPHEHSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVECMTCNGES
                                                                                                            KQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQPWS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GNGKNYMGNLSQTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPWCY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PHEHDMTPENFKCKDLRENYCRNPDGSESFWCFTTDPNIRVGYCSQIPNCDMSHGQDCYR 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LDPHTRWEYCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDSQY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CNGEHYRGPMDYTESGKECQRWDLQRPHKHKFRPERYPNKGLNDNYCRNPDGKSRPWCYT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SMIPHEHSFLPSTYRGKDLKENYCRNPKGEEGGPWCFTKSPEVRHDVCDIPFCSEVDCVT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KRRNPLHDYKKTGELMLIKVNKTLEVKTKLLNTTEQCAKRCSRNKGLSFTCKAFAYDRVT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GNGSTYKGTLSRTRFRLPCSMWEKNLQDLKRHTFNEPDVSILQKNYCRNPDNDAHGPWCY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PHIHNFTPENYKCKDLSENYCRNPDGSESPWCFTTDPNIRIGHCSQIKKCQASNQQECYY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LDPDTSWEFCAIKPCVHSIVNNTDI - - -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KRCHWFSFNTMSAGIKDKYDISFDLYEKKDYIRDCIHGKGSNYRGTRNVTKRGLACQPWN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KKRNAFDDYKKTAETTLTRLNKALEVKTKMFNTTENCAKRCSRNKGLPFTCKAFAFDKNI
   YRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWCYTLDPHT
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75.9%;
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3; Mismatches 68;
                                                                                                                                                                                                                                                           Score 1750; DB 2;
Pred. No. 1.1e-117;
7; Mismatches 45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    from
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                                                                                                                                                                                                                                                                                                  Length 411;
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Sharpe, M.J.;

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kringle

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Gaps

89

122

182 149

242

209

09-Jul-2004

437 417 377

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A;Reference number: A61395; MUID:91217635; PMID:1827141

A;Reference number: A61395

A;Molecule type: protein

A;Residues: 230-247;288-291,'E',293-295,'X',297-301,'X',303,'E',305,'EX',308-310;326-331

C;Complex: disulfide homology kR1>
F;191-268/Domain: kringle homology kR2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 macrophage-stimulating protein 1 precursor - human
C;Species: Homo sapiens (man)
C;Date: 03-May-1994 #sequence_revision 14-Nov-1997 #text_ch
C;Date: 03-May-1994 #sequence_revision 14-Nov-1997 #text_ch
C;Accession: A40331; B40331; A47136; A61395
R;Han, S.; Stuart, L.A.; Degen, S.J.F.
Biochemistry 30, 9768-9780, 1991
A;Title: Characterization of the DNF1582 locus on human chr
A;Reference number: A40331; MUID:92002016; PMID:1655021
A;Reference number: A40331; MUID:92002016; PMID:1655021
A;Accession: A40331
A;Molecule type: DNA
A;Residues: 1-711 <HA1>
A;Cross-references: UNIPROT:P26927; GB:M74179
A;Accession: B4031
A;Accession: B4031
A;Residues: 1-711 <HA2>
A;Cross-references: GB:M74178; NID:9183976; PIDN:AAA50165.1
A;Cross-references: GB:M74178; NID:9183976; PIDN:AAA50165.1
A;Cross-references: GB:M74178; NID:9183976; PIDN:AAA50165.1
                                                                                                                           F;110-186/Domain: kringle homology <KR1>
F;191-268/Domain: kringle homology <KR2>
F;283-361/Domain: kringle homology <KR3>
F;283-361/Domain: kringle homology <KR4>
F;370-448/Domain: kringle homology <KR4>
F;484-711/Domain: beta chain #status predicted <BCH>
F;484-711/Domain: beta chain #status predicted <BCH>
F;484-704/Domain: trypsin homology <FR9-756-78,60-66,110-186,131-169,157-181,191-268,212-251,240-263,283-361,304-343,332-355,37
F;56-78,60-66,110-186,131-169,157-181,191-268,212-251,240-263,283-361,304-343,332-355,37
F;72,296,615/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Residues: 1-12, 'C',14-622,'F',624-711 <YOS>
A;Cross-references: GB:L11924; NIC:g398037; DIDN:AAA59872.1; PID:g398038
A;Note: authors translated the codon TTT for residue 623 as Leu; parts of this R;Skeel, A.; Yoshimura, T.; Showalter, S.D.; Tanaka, S.; Appella, E.; Leonard, J. Exp. Med. 173, 1227-1234, 1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ş
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R;Yoshimura, T.; Yuhki, N.; Wang, M.H.; Skeel, A.; Leonard, J. Biol. Chem. 268, 15461-15468, 1993
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                                   Similarity
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                               45.48;
   60;
                               Score 1171;
Pred. No. 4.
       Mismatches
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                                   .4e-76;
                                                                  DB 1;
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                                                           Length 711;
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10;
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A. Title: Molecular cloning of rat macrophage-stimulating protein and its involvements. A; Reference number: JC5061; MUID:97011126; PMID:8858136
A; Reference number: JC5061
A, Rocession: JC5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      macrophage-stimulating protein 1 precursor-
C;Species: Rattus norvegicus (Norway rat)
C;Date: 31-Jan-1997 #sequence_revision 31-Jar
C;Accession: JC5061
R;Ohshiro, K; Iwama, A.; Matsuno, K.; Ezaki,
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Pred. No. 2.1e.
68; Mismatches
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Takasu, 'n

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A;Introns: 18/1; 67/2; 105/1; 143/2; 189/1; 229/2; 269/1; 334/2; 378/1; 412/2; 458/1; 47 (C;Complex: disulfide-bonded heterodimer of chains derived from the same precursor C;Superfamily: hepatocyte growth factor/macrophage stimulating protein 1; kringle homolo C;Keywords: duplication; glycoprotein; growth factor; kringle form the same precursor c;Keywords: duplication; glycoprotein; growth factor; kringle formal signal sequence #status predicted <SIG>F;19-488,489-716/Droduct: macrophage-stimulating protein 1 #status experimental <MAT>F;19-483/Domain: alpha chain #status experimental <ACH>F;110-186/Domain: kringle homology <KR1>F;191-268/Domain: kringle homology <KR2>F;292-370/Domain: kringle homology <KR3>F;399-457/Domain: kringle homology <KR4>F;489-709/Domain: beta chain #status experimental <BCH>F;489-709/Domain: trypsin homology <KR4>F;489-709/Domain: trypsin homology <KR4
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A; Residues: 1-18, 'P', 20-716 < DEG2 >
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A;Title: Characterization of the mouse cDNA and gene coding A;Reference number: A40332; MUID:92002017; PMID:1832957
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;Species: Mus musculus (house mouse)
;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992 #text_change
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Best Local :
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                                                                            GPWCFTSNPEVRYEVCDIPQCSEVECMTCNGESYRGLMDHTESGKICQRWDHQTPHRHKF
                                                                                                                                                                                                     YIRNCIIGKGRSYKGTVSITKSGIKCQPWSSMIPHEHSYR---GKDLQENYCRNPRGEEG
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        GPWCYTTNRSVRFQSCGIKTCREAVCVLCNGEDYRGEVDVTESGRECQRWDLQHPHSHPF
                                                                                                                                                         YVRTCIMDNGVSYRGTVARTAGGLPCQAWSRRFPNDHKYTPTPKNGLEENFCRNPDGDPR
                                                                                                                                                                                                                                                                                                                  VADAEECARRC----GPLLDCRAFHYNMSSHGCQLLPWTQHSLHTQLYHSSLCHLFQKKD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 1114.5; DB Pred. No. 4.8e-72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PIDN:AAA50167.1; PID:g193834
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           143;
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                                                            Appendiction: dissolves the fibrin of blood clots; acts as a proteolytic factor in a vans the walls of the grasfian follicle; also activates the urokinase-type plasminogen act A; Pathway: fibrinolysis
C; Superfamily: plasmin, kringle homology; plasminogen-related protein precursor homology
C; Keywords: fibrinolysis; glycoprotein; hydrolase; kidney; kringle; plasma; serine prote
F; 1-790/Product: plasminogen #status predicted <PRO>
F; 1-77/Domain: plasminogen-related protein precursor homology (fragment) <PLPH>
F; 1-77/Domain: plasmin chain A #status predicted <APT>
F; 78-560/Product: plasmin chain A #status predicted <APT>
F; 84-162/Domain: kringle homology <KR1>
F; 166-243/Domain: kringle homology <KR1>
F; 358-435/Domain: kringle homology <KR2>
F; 358-435/Domain: kringle homology <KR3>
F; 3561-790/Product: miniplasminogen #status experimental <MIN>
F; 461-540/Domain: kringle homology <KR4>
F; 461-83/Domain: kringle homology <KR4>
F; 461-83/Domain: kringle homology <KR4>
F; 561-790/Product: plasmin chain B #status experimental <BCH>
F; 30-54, 34-42, 84-162, 105-145, 133-157, 166-243, 169-297, 187-226, 215-238, 256-333, 277-316, 305
F; 30-54, 34-42, 84-162, 105-145, 133-157, 166-243, 169-297, 187-226, 215-238, 256-333, 277-316, 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: protein
A; Residues: 1-57 < BRUJ
R; Residues: 1-57 < BRUJ
R; Marti, T.; Schaller, J.; Rickli, E.E.
Eur. J. Biochem. 149, 279-285, 1985
Eyr. J. Biochem. 149, 279-285
Eyr. J. Biochem
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R;Brunisholz, R.A.; Lerch, P.G.; Schaller, J.; Rickli, E.E.; Lergier, W.; Mann Eur. J. Biochem. 114, 465-470, 1981
Eur. J. Biochem. 164, 465-470, 1981
A;Title: Comparison of the primary structure of the N-terminal CNBr fragments A;Reference number: S03735; MUID:81212097; PMID:7238497
A;Accession: S03737
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C;Date: 07-Sep-1990 #sequence revision 01-Nov-1996 #text_change 09-Jul-2004
C;Accession: S03733; S03737; Ā25834
R;Schaller, J.; Marti, T.; Roesselet, S.J.; Kaempfer, U.; Rickli, E.E.
Fibrinolysis 1, 91-102, 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: protein
A; Residues: 450-790 < MAR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: protein A; Residues: 1-560 <SCH>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Accession: S03733
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      plasmin (EC 3.4.21.7) precursor - N;Alternate names: plasminogen
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Genomics 8, 49-61, 1990
A;Title: Characterization of the cDNA coding for mouse plasminogen and localization of A;Reference number: A38514; MUID:91184812; PMID:2081600
A;Reference number: A38514 MUID:91184812; PMID:2081600
A;Reference number: A38514
A;Residues: 1-812 <DEGs
A;Cross-references: UNIPROT:P20918; GB:J04766; NID:g200402; PIDN:AAA50168.1; PID:g20040
R;Lijnen, H.R.; van Hoef, B.; Beelen, V.; Collen, D.
Bur. J. Biochem. 224, 863-871, 1994
A;Title: Characterization of the murine plasma fibrinolytic system.
A;Reference number: S48202
A;Accession: S48202
A;Accession: S48202
A;Molecule type: protein
A;Residues: 20-25 <LIJ>
A;Accession: S48203
A;Molecule type: protein
A;Residues: 22-27 <LI2>
C;Comment: Plasminogen is synthesized by the kidney and is present in plasma and many c;Comment: Plasminogen is converted into plasmin by plasminogen activators, both plasm: mediately after dissociation from the clot. In the presence of the inhibitor, the activation involves also removal of the activation peptide.
C;Comment: Stromelysin 1 (see PIR:KCMSS1) acts on plasminogen to produce angiostatin. feful in treating solid tumors.
  ns the walls of A; Pathway: fibr C; Superfamily:
                                                              eful in treating C; Function: d: A; Description: d:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 plasmin (EC 3.4.21.7) precursor - mouse
N;Contains: angiostatin; plasminogen
C;Species: Mus musculus (house mouse)
C;Date: 20-Sep-1991 #sequence revision 01-Nov-1996
C;Accession: A38514; S48202; S48203
R;Degen, S.J.F.; Bell, S.M.; Schaefer, L.A.; Elliot Genomics 8, 49-61, 1990
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F;185-262/Domain: kringle homology <RR2>
F;275-352/Domain: kringle homology <RR2>
F;277-352/Domain: kringle homology <RR3>
F;377-454/Domain: kringle homology <KR4>
F;481-560/Domain: kringle homology <KR5>
F;481-560/Domain: kringle homology <KR5>
F;582-812/Domain: kringle homology <RR5>
F;582-812/Domain: trypsin homology <TRY2
F;582-805/Domain: trypsin homology <TRY2
F;49-73,53-61,103-181,124-164,152-176,185-262,188-316,206-245,234-257,275-352,296-335,3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           bonds: #status predicted

F;78-79/Cleavage site: Glu-Asn (stromelysin 1) #status predict

F;136,308/Binding site: carbohydrate (Asn) (covalent) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Keywords: angiogenesis inhibitor; blood; duplication, F;1-96/Domain: plasminogen-related protein precursor k;1-19/Domain: signal sequence #status predicted <SIG kg;1-19/Domain: signal sequence #status predicted <PRO>F;20-812/Product: plasminogen #status predicted <PRO>
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Best Local
443
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                                         LIPWDYCPISRCEGDTTPTIV
SVRWEYCNLKRC-SETGGSVV
                                                                                                                                      GNLSQTRSGLTCSMWDKNMEDLHRHIFWE---PDASKLNENYCRNPDDDAHGPWCYTGNP
                                                                                                                                                                                                                                   DGSESPWCFTTDPNIRVGYCSQIPNCDMSHG---
                                                                                                                                                                                                                                                                                    PPSPTYQCLKGRGENYRGTVSVTVSGKTCQRWSEQTPHRHNRTPENFPCKNLEENYCRNP
                                                                                                                                                                                                                                                                                                               VPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDSQYPHEHDMTPENFKCKDLRENYCRNP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LYENKDYIRNCIIGKGRSYKGTVSITKSGIKCOPWSSMIPHEHSYR-----GKDLQENYC
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                                                                                                                                                                                     DGETAPWCYTTDSQLRWEYC-EIPSCESSASPDQSDSSVPPEEQTPVVQECYQSDGQSYR
                                                                                                                                                                                                                                                                                                                                                                               QSPHAHGYIPAKFPSKNLKMNYCHNPDGEPRPWCFTTDPTKRWEYCDIPRCT----TPPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RNPDNDEQGPWCYTTDPDKRYDYCNIPECEE
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Pred. No. 1.2e
54; Mismatches
                                              442
                                                                                             HRHSKTPENFPDAG-LEMNYCRNPDGD-KGPWCYTTDP
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1.2e-66;
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plasmin (EC 3.4.21.7) precursor - western European hedgehog C.Species: Erinaceus europaeus (western European hedgehog) C.Date: 21-Feb-1997 #sequence_revision 21-Feb-1997 #text_cha C.Accession: I46260 R.Lawn, R.M.; Boonmark, N.W.; Schwartz, K.; Lindahl, G.E.; V. Biol. Chem. 270, 24004-24009, 1995 A.;Title: The recurring evolution of Lp(a): Insights from cla A.Reference number: I46269; MUID:96025778; PMID:7592597 A.;Accession: I46260 A.Status: greliminary; translated from GB/EMBL/DDBJ A.;Molecule type: mRNA

#text_change

09-Jul-2004

D.P.; of hedgehog

Byrne,

Fon

cloning Wade,

apolipopro C.D.; I46260

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A;Residues: 1-810 <LAW>
A;Cross-references: UNIPROT:Q29485; EMBL:U33171; NID:g1046360; PID:g1046361
C;Superfamily: plasmin; kringle homology; plasminogen-related protein precur
C;Keywords: hydrolase; serine proteinase
F;1-96/Domain: plasminogen-related protein precursor homology <PLPH>
F;103-181/Domain: kringle homology <KR1>
F;103-181/Domain: kringle homology <KR2>
F;275-352/Domain: kringle homology <KR3>
F;379-456/Domain: kringle homology <KR3>
F;379-456/Domain: kringle homology <KR4>
F;379-456/Domain: kringle homology <KR5>
F;582-803/Domain: kringle homology <KR5>
F;582-803/Domain: krypsin homology <KR5>
F;103-181/Domain: k
F;185-262/Domain: k
F;275-352/Domain: k
F;377-454/Domain: k
F;377-454/Domain: k
                                                                                                                                                                                                                                                                                                                          B30848
plasmin (EC 3.4.21.7) precursor - rhesus macaque
C;Species: Macaca mulatta (rhesus macaque)
C;Date: 31-Mar-1989 #sequence_revision 31-Mar-1989
C;Accession: B32869; B30848
R;Tomlinson, J.E.; McLean, J.W.; Lawn, R.M.
J. Biol. Chem. 264, 5957-5965, 1989
J. Biol. Chem. 264, 5957-5965, 1989
                                                                                                                                           A;Molecule type: mRNA
A;Residues: 1-810 <TOM>
A;Residues: 1-810 <TOM>
A;Cross-references: UNIPROT:P12545; GB:J04697; NID:g342272; PIDN:AAA36901.1; PID:g342273
C;Superfamily: plasmin; kringle homology; plasminogen-related protein procursor homology
C;Keywords: fibrinolysis; glycoprotein; hydrolase; kringle; serine proteinase
                                                                                                                                                                                                                                                A;Reference number: A32869;
A;Accession: B32869
A;Status: preliminary
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                                                                                                      F;1-96/Domain: plasminogen-related protein precursor homology <PLPH>F;1-9/Domain: signal sequence #status predicted <SIG>
                                                                                                                                                                                                                                                                                              A;Title: Rhesus monkey apolipoprotein(a). Sequence, evolution, A;Reference number: A32869; MUID:89174660; PMID:2925643
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                 kringle homology <KR1>
kringle homology <KR2>
kringle homology <KR3>
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Pred. No. 2.2e
54; Mismatches
                                         ^KR2>
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F;49-73,53-61,103-181,124-164,152-176,185-262,188-316,206-245,234-257,275-352,296-335,32
bonds: #status predicted
F;622,665,760/Active site: His, Asp, Ser #status predicted
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                                                                                                                                                                                                                                                                     QTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWCYTLDPHTRWEYCAIKTCADNTMNDTD
                                                                                                                                                                                                                                                                                                                                                    RNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVECMTCNGESYRGLMDHTESGKICQRWDH
                                                                                                                                                                                                                                                                                                                                                                                                                       LYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQPWSSMIPHEHSYR-----GKDLQENYC
                                                                  YMGNLSQTRSGLTCSMW-------KNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGP
                                                                                                        NPDGEKAPWCYTTNSQVRWEYC-KIPSCESSPVSTEPLDPTAPPELTPVVQECYHGDGQS
                                                                                                                                                                             PPSSGPTYQCLKGTGENYRGDVAVTVSGHTCHGWSAQTPHTHNRTPENFPCKNLDENYCR
                                                                                                                                                                                                                                                                                                                       RNPDNDGQGPWCYTTDPEERFDYCDIPEC-EDECMHCSGENYDGKISKTMSGLECQAWDS
                                                                                                                                                                                                                                                                                                                                                                                             LFEKKVYLSECKTGNGKNYRGTMSKTRTGITCQKWSSTSPHRPTFSPATHPSEGLEENYC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TKKQLGAGSIEECAAKCEEEE--EFTCRSFQYHSKEQQCVIMAENRKSSIVFRM--RDVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TKK---VNTADQCANRCTRNKGLPFTCKAFVFDKARKQCLWFPFNSMSSGVKKEFGHEFD
WCYTGNPLIPWDYCPISRCEG
                                      YRGTSSTTTTGKKCQSWSSMTPHWHEKTPENF-
                                                                                                                                        NPDGSESPWCFTTDPNIRVGYCSQIPNCDMSH----
                                                                                                                                                                                                                                                 QSPHAHGYIPSKFPNKNLKKNYCRNPDGEPRPWCFTTDPNKRWELCDIPRCT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       39.6%;
42.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 1021; DB 2;
Pred. No. 2.6e-65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches 127;
                                                                                                                                           --GQDCYRGNGKN
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A;Note: it is uncertain whether Met-1 or Met-8 is the initial R;Schaller, J.; Moser, P.W.; Dannegger-Muller, G.A.K.; Rosse. Eur. J. Biochem. 149, 267-278, 1985
A;Title: Complete amino acid sequence of bovine plasminogen. A;Reference number: A25835; MUID:85203906; PMID:3846532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R;Berglund, L.; Andersen, M.D.; Petersen, T.I
submitted to the EMBL Data Library, May 1994
A;Description: Cloning and characterizatin of
A;Reference number: S45046
A;Accession: S45046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Species: Bos primigenius taurus (cattle)
C;Date: 30-Sep-1987 #sequence_revision 28-Apr-1995
C;Accession: S45046; A25835; I45961; S03736
           A;Reference number: I45961; MUID:85023311; PMID:6148961
A;Sterence number: I45961
                                                                                                      A; Molecule type: protein
A; Residues: 27-334,'D',336-515,'H',517-554,'L'
R; Malinowski, D.F.; Sadler, J.E.; Davie, E.W.
Biochemistry 23, 4243-4250, 1984
                                                                                                                                                                                                                  A;Reference number: A25835;
A;Accession: A25835
                                                                                                                                                                                                                                                                                                                                                                                    A; Experimental source: liver
                                                                                                                                                                                                                                                                                                                                                                                                             A; Residues: 1-812 <BER>
A; Cross-references: UNIPROT: P06868; EMBL: X79402; NID: g494962;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               plasmin (EC 3.4.21.7) precursor - N;Alternate names: plasminogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: mRNA
A;Status: translated from
     GB/EMBL/DDBC
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                                                                                                                                                               ,556-812
                                                                                                                                                                                                                                                                                                                                 is the initiator G.A.K.; Rosselet,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         bovine
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   plasminogen
                                                                                                                                                                                                                                                                              Comparison
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                                                                                                                                                                                                                                                                                                                                 S.J.; Kampfer,
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A;Cross-references: GB:K02935; NI:GLI
R;Brunisholz, R.A.; Lerch, P.G.; Schaller, J.; Rickli, E.E.; Lergier, W.; Manneberg, M.
Bur, J. Biochem. 114, 465-470, 1981
A;Title: Comparison of the primary structure of the N-terminal CNBr fragments of human, A;Reference number: S03735; MUID:B1212097; PMID:7238497
A;Accession: S03735
A;Molecule type: protein
A;Residues: 27-83 <BRU>
C;Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   F;8-103/Domain: plasminogen-related protein precursor homology <PLPH>
F;27-812/Product: plasminogen #status experimental <PRO>
F;27-103/Domain: activation peptide #status experimental <APT>
F;104-583,584-812/Product: plasmin #status experimental <APT>
F;104-583/Domain: plasmin chain A #status experimental <ACH>
F;101-188/Domain: kringle homology <KR1>
F;110-188/Domain: kringle homology <KR2>
F;192-269/Domain: kringle homology <KR2>
F;192-269/Domain: kringle homology <KR3>
F;384-461/Domain: kringle homology <KR3>
F;384-461/Domain: kringle homology <KR5>
F;384-461/Domain: kringle homology <KR5>
F;384-461/Domain: kringle homology <KR5>
F;384-812/Domain: kringle homology <KR5>
F;384-812/Domain: plasmin chain B #status experimental <BCH>
F;584-812/Domain: truncin homology <KR5>
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C;Superfamily: plasmin; kringle homology; plasminogen-related protein precursor
C;Keywords: duplication; fibrinolysis; glycoprotein; hydrolase; kidney; kringle;
F;1-26/Domain: signal sequence #status predicted <SIG>
F;8-103/Domain: plasminogen-related protein precursor homology <PLPH>
F;8-103/Domain: plasminogen #status experimental <PRO>
F;27-812/Product: plasminogen #status experimental <APT>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Description: dissolves the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            584-805/Domain: trypsin homology <TRY>
-56-80,60-68,110-188,131-171,159-183,192-269,195-323,213-252,241-264,282-359,303-342,3
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446 TTDPRVRWEFCNLKKC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWCYTLDPHTRWEYCAIKTCADNTMND
                                                                                                                 QSYRGTSSTTITGRKCQSWSSMTP--HRHLKTPENYPNAG-LTMNYCRNPDAD-KSPWCY
                                                                                                                                                                                                                         CRNPNGEKAPMCYTTNSEVRWEYCT-IPSCESSPLSTERMDVPVPPEQTPVPQDCYHGNG
                                                                                                                                                                                                                                                                                       CRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSH-------GQDCYRGNG
                                                                                                                                                                                                                                                                                                                                                 TPPPSSGPKYQCLKGTGKNYGGTVAVTESGHTCQRWSEQTPHKHNRTPENFPCKNLEENY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVECMTCNGESYRGLMDHTESGKICQRW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQPWSSMIPHEHSYRGK-----DLQEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SLSRKNLAGRSVEDCAAKC--EEETDFVCRAFQYHSKEQQCVVMAENSKNTPVFRM--RD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDKARKQCLWFPFNSMSSGVKKEFGHE
                                                       TGNPLIPWDYCPISRC
                                                                                                                                                                     KNYMGNLSQTRSGLTCSMWDKNMEDLHRHIFWE---PDASKLNENYCRNPDDDAHGPWCY
                                                                                                                                                                                                                                                                                                                                                                                                        TDVPLE--TTECIOGOGEGYRGTVNTIWNGIPCORWDSOYPHEHDMTPENFKCKDLRENY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YCRNPDNDENGPWCYTTDPDKRYDYCDIPEC-EDKCMHCSGENYEGKIAKTMSGRDCQAW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DSQSPHAHGYIPSKFPNKNLKMNYCRNPDGEPRPWCFTTDPQKRWEFCDIPRCT-----
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          39.5%;
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461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            73;
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Pred. No. 3.3e-65;
3; Mismatches 137; Indels 43;
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RESULT PLHU

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A;Cross-references: GB:X05199; NID:g35530; PIDN:CAA28831.1; PI A;Experimental source: liver R;Malinowski, D.P.; Sadder, J.E.; Davie, E.W. Biochemistry 23, 4243-4250, 1984
A;Title: Characterization of a complementary deoxyribonucleic A;Reference number: I45961; MUID:85023311; PMID:6148961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   plasmin (EC 3.4.21.7) precursor [validated] - human
N,Alternate names: plasminogen precursor [misnomer]
N,Contains: angiostatin; microplasmin; plasminogen
C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Apate: 24-Apr-1984 #sequence revision 02-Dec-1994 #text change 09-Jul-2004
C;Accession: A35229; I52242; A26646; I62738; I84609; S03735; A00929; A04627;
R;Petersen, T.E.; Martzen, M.R.; Ichinose, A.; Davie, E.W.
J. Biol. Chem. 265, 6104-611, 1990
A;Title: Characterization of the gene for human plasminogen, a key proenzyme
A;Reference number: A35229; MUID:90202879; PMID:2318848
A;Accession: A35229; MUID:90202879; PMID:2318848
                                                                                                                                                                                                                                                             Eur. J. Blochem. 76, 129-137, 1977
A;Title: Primary structure of the B-chain of human plasmin
A;Reference number: A04627, MUID:77225245; PMID:142009
A;Accession: A04627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Molecule type: protein
A;Residues: 20-71, E,73-76 <BRI
R;Sottrup-Jensen, L.; Petersen,
submitted to the Atlas, July 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 292-471, 'D',473-810 <MAL2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Title: Molecular cloning and characterization of a full-length cDNA clone for human p. A;Reference number: A26646; MUID:87162490; PMID:3030813
A;Accession: A26646
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: UNIPROT:P00747; UNIPROT:Q9UBQ9; UNIPROT:Q9UMI2; GB:J05286; GB:M3427 A;Experimental source: leukocyte; lung fibroblast R;Malgaretti, N.; Bruno, L.; Bruno, M.; Candiani, G.; Meroni, G.; Ottolenghi, S.; T Biochem. Biophys. Res. Commun. 173, 1013-1018, 1990
A;Title: Definition of the transcription initiation site of human plasminogen gene in l A;Reference number: 152242; MUID:91097523; PMID:2268308
                                                                                                                              A;Molecule type: protein
A;Residues: 581-810 <WII>
R;Wiman, B.; Wallen, P.
Eur. J. Biochem. 50, 489-494, 1975
                                                                                                                                                                                                                                                                                                                                                                                        A;Residues:
R;Wiman, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Reference number: A; Accession: A00929
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Title: Comparison of the primary structure of the N-terminal CNBr fragments of human, A;Reference number: S03735; MUID:81212097; PMID:7238497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: GB:K02921; NID:g190110; PIDN:AAA60123.1; R;Brunisholz, R.A.; Lerch, P.G.; Schaller, J.; Rickli, E.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: DNA
A; Residues: 367-419
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A;Residues: 20-71,'E',73-85,87-106,'D',108-360,'E',362-810 <SOT>
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A; Residues: 1-471, 'D', 473-810 <FOR>
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A; Residues: 1-16 < MAL1>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       J. Biochem. 114, 465-470, 1981
                                                                                            Structural relationship between "glutamic acid" and
number:
1: A04625
                              A04625; MUID:75093329;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <MAL3 >
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,73-76 <BRU>
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                              PMID:122932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIDN:AAA60124.1; PID:g387031
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Lergier, W.
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de Vos, A.M.; Ultsch, M.H.; Kelley, R.F.; Padmanabhan, K.; Tulinsky, A.; Westbrook,

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A;Molecule type: protein
A;Residues: 483-507, E, 509-604 <WI3>
A;Residues: 483-507, E, 509-604 <WI3>
I, R;Robbins, K.C.; Bernabe, P; Arzadon, L.; Summaria, L.
J. Biol. Chem. 248, 1631-1633, 1973
A;Title: The primary structure of human plasminogen. II.
A;Reference number: A92125; MUID: 73149248; PMID:4694729
A;Contents: annotation; active site
A;Groskopf, W.R.; Summaria, L.; Robbins, K.C.
T, Thirly Chem. 25, 200 April 10 Ap
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A;Title: The fibrin-binding site of human plasminogen. Arginines 32 and 34 are essential A;Reference number: A92458; MUID:85054794; PMID:6094526
A;Contents: annotation; fibrin binding site; omega-aminocarboxylic acid binding site R;Cao, Y.; Ji, R.W.; Davidson, D.; Schaller, J.; Marti, D.; Soehndel, S.; McCance, S.G.; J. Biol. Chem. 271, 29461-29467, 1996
A;Title: Kringle domains of human angiostatin. Characterization of the anti-proliferativ A;Reference number: A58811; MUID:97067211; PMID:8910613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Contents: annotation
R;Lijnen, H.R.; Ugwu, F.; Bini, A.; Collen, D.
Riochemistry 37, 4699-4702, 1998
Biochemistry 37, 4699-4702, 1998
A;Title: Generation of an angiostatin-like fragment from plasminogen by stromelysin-la;Reference number: A58812; MUID:9548733; PMID:9548733
A;Contents: annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Trexler, M.; Vali, Z.; Patthy, L.
J. Biol. Chem. 257, 7401-7406, 1982
A;Title: Structure of the omega-aminocarboxylic acid-binding sites
A;Reference number: A92382; MUID:82213905; PMID:6919539
A;Contents: annotation; omega-aminocarboxylic acid binding sites
R;Vali, Z.; Patthy, L.
J. Biol. Chem. 259, 13690-13694, 1984
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A;Title: Studies on the active center of human plasmin.
A;Reference number: A92048; MUID:69234739; PMID:4240117
A;Contents: annotation; active site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Reference number: A04626; MUID:76043692; PMID:126863
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Eur. J. Biochem. 58, 539-547, 1975
A;Title: Amino-acid sequence of th
                                            Biochemistry 30, 10589-10594, 1991
A;Title: The refined structure of the epsilon-aminocaproic acid complex of human
A;Reference number: A58818; MUID:92031503; PMID:1657149
                                                                                                                                                                                                                                                                              A;Contents: annotation; X-ray crystallography, 2.1 angstroms, R;Mulichak, A.M.; Tulinsky, A.; Ravichandran, K.G. Biochemistry 30, 10576-10588, 1991 Biochemistry 30, 10576-10588, 1991 A;Tille: Crystal and molecular structure of human plasminogen A;Reference number: A58819; MUID:92031502; PMID:1657148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;Padmanabhan, K.; Tulinsky, A. submitted to the Brookhaven Protein Data Bank, A;Reference number: A52408; PDB:1PMK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         submitted to the Brookhaven Protein Data Bank, July 1991
A;Reference number: A51341; PDB:1PK4
A;Contents: annotation; X-ray crystallography, 1.9 angstroms,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Contents: annotation; X-ray crystallography, R;Tulinsky, A.; Mathews, I.I.
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                                                                                                                                                                                     K.; Tulinsky, A.; Mulichak, A.M
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d PIR:FOHUGB).

C;Comment: Plasmin is inactivated by alpha-2-antiplasmin (see PIR:ITHUA2) immediately af C;Comment: Plasmin is inactivated by two disulfide bonds. Without the inhibitor, rg-580, resulting in two chains connected by two disulfide bonds. Without the inhibitor, C;Comment: Microplasmin is formed by autolytic cleavage of plasmin under artificial cond C;Comment: Stromelysin 1 (see PIR:KCHUS1) acts on plasminogen to produce angiostatin. To
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                submitted to the Brookhaven Protein Data Bank, August 1996
A,Reference number: A65804; PDB:HPK
A;Contents: annotation; conformation by (1)H-NMR, residues 103-181
R,Rejante, M.R.; Linas, M.
RNTILLE: (1)H-NMR assignments and secondary structure of human plasminogen kringle 1.
A;Reference number: S4345; MUID:94237157; PMID:8181475
A;Contents: annotation; conformation by (1)H-NMR, residues 96-184
R,Rejante, M.R.; Llinas, M.
RNTILLE: Solution structure of the epsilon-aminohexanoic acid complex of human plasmin A;Reference number: A58817; MUID:94237158; BMID:8181476
A;Reference number: A58817; MUID:94237158; BMID:8181476
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C;Comment: Plasminogen is synthesized by the kidney and is present in plasma and many of
C;Comment: Plasminogen is converted to plasmin by plasminogen activators (see PIR:UKHU a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Reference number: A65803; A; Contents: annotation; conf R; Rejante, M.; Llinas, M.
                                                                                                                                                                                                                                                                                                                                                                                                                               F;79-466/Product: angiostatin #status experimental <AST>
F;97-580,581-810/Product: plasmin #status experimental <NE;97-580/Domain: plasmin chain A #status experimental <NE;97-580/Domain: kringle homology <NE1>
F;103-181/Domain: kringle homology <NE2>
F;185-262/Domain: kringle homology <NE3>
F;275-352/Domain: kringle homology <NE3>
F;275-352/Domain: kringle homology <NE3>
F;275-352/Domain: kringle homology <NE3>
F;481-560/Domain: kringle homology <NE3>
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C;Superfamily: plasmin; kringle homology; plasminogen-related protein precursor homology
C;Keywords: anglogenesis inhibitor; blood; duplication; fibrinolysis; glycoprotein; hydr
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A;Map position: 6q26-6q27
A;Introns: 17/1; 62/2; 98/1; 136/2; 183/1; 223/2; 263/1; 317/2; 366/1; 419/2; 480/1; 529
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A;Title: Crystal structure of the kringle 2 domain of tissue
A;Reference number: A39483; MUID:92118803; PMID:1310033
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                                                                                                                                                                                                                                                                                                                                                                                                    ;550-580,581-810/Product:
                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                   Local
                                                                                                    37
                                                                                                                                                                                                                                                    191;
                                                                                                                                                                                                                                                                                       Similarity
LYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQPWSSMIPHE-----HSYRGKDLQENYC
                                                                                             TKKQLGAGSIEECAAKCEEDE--EFTCRAFQYHSKEQQCVIMAENRKSSIIIRM--RDVV
                                                                                                                                                                      TKK---VNTADQCANRCTRNKGLPFTCKAFVFDKARKQCLWFPFNSMSSGVKKEFGHEFD
                                                                                                                                                                                                                                                    Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                microplasmin
                                                                                                                                                                                                                                                    67;
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RNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVECMTCNGESYRGLMDHTESGKICQRWDH 201

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	Qy 422 LIPWDYCPISRCEGDTTPT 440 : :	Qy 365 GNLSQTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPWCYTGN	Qy 313 LRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSH- 	Qy 253 ADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDSQYPHEHDMTPENFKCKD ::: ::	QY 193 GKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWCYTLDPHTRWEYCAIKTC	Qy 144 PRGEEGGPWCFTSNPEVRYEVCDIPQCSEVECMTCNGESYRGLMDHTE	Qy 89 ENKDYIRNCIIGKGRSYKGTVSITKSGIKCQPWSSMIPHEHSYRGKDLQENYC 	Query Match Best Local Similarity 45.4%; Pred. No. 4.9e Matches 172; Conservative 50; Mismatches	/; translated from GB/EMBL A MAWA JAMPA JAMPROT:Q28398; EMBL:U3317 B: liver rotein Lp(a), a major inhe	R;Lawn, R.M.; Boonmark, N.W.; Schwartz, K.; Lir J. Biol. Chem. 270, 24004-24009, 1995 A;Title: The recurring evolution of Lp(a): Insi A;Reference number: I46259; MUID:96025778; PMII	western European hedgehog europaeus (western Europe #sequence_revision 15-Oct	Db 441 DPSVRWEYCNIKKCSG-TEASVV 462	Qy 420 NPLIPWDYCPISRCEGDTTPTIV 442	Qy 363 YMGNLSQTRSGLTCSMMDKNMEDLHRHIFWEPDASK	Db 326 NPDGKRAPWCHTTNSQVRWEYC-KIPSCDSSPVSTEQLAPTAPPELTPVVQDCYHGDGQS	H	CY 202 VPLB-11ECLQSQSESTKG VNIINVELPCQKWDSQYEHEHDTEERYKCKLLKENYCH Db 266 PBSGPTYQCLKGTGENYRGNVAVTVSGHTCQHWSAQTPHTHNRTPENFPCKNLDENYCH	212 QSPHAH	202	202
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ALIGNMENTS

Nakamura T., Nishizawa T., Hagiya M., Seki T., Shimonishi M., Sugimura A., Tashiro K., Shimizu S.; "Molecular cloning and expression of human hepatocyte growth factor.", Nature 342:440-443(1989). [5] [5] [5] SEQUENCE FROM N.A. (ISOFORM 2). TISSUE=Placenta; MEDLINE=91200041; PubMed=1826653; Mivazawa K., Kitamura A., Naka D., Kitamura N.;	R R R C
izawa T., Hagiya M., Seki T., Shimonishi M., iro K., Shimizu S.; g and expression of human hepatocyte growth factor. 3(1989). . (ISOFORM 2).	N C
T., Nishizawa T., Hagiya M., Seki T., Shimonishi M., A., Tashiro K., Shimizu S.; ar cloning and expression of human hepatocyte growth factor. 42:440-443(1989). FROM N.A. (ISOFORM 2).	;
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WA Wagner-McPherson C., Layman D., Maas J., Jaeger S., Walker R.,

Waylie K., Sekhon M., Becker M.C., O'Laughhin M.D., Schaller M.E.,

Wa Wylie K., Sekhon M., Becker M.C., O'Laughhin M.D., Schaller M.E.,

Wa Walle K., Sekhon M., Becker M.C., O'Laughhin M.D., Schaller M.E.,

Wa Sun H., Edwards J., Bradshaw-Cordum H., Ali J., Andrews S., Isak A.,

Wanbrunt A., Nguyen C., Du F., Lamar B., Courtney L., Kalicki J.,

Wa Vanbrunt A., Nguyen C., Du F., Lamar B., Courtney L., Kalicki J.,

Wanbrunt A., Neu S., Tomlinson C., Dauphin-Kohlberg S.,

Wa Vanbrunt A., Hou S., Tomlinson C., Dauphin-Kohlberg S.,

Wozlowicz-Reilly A., Leonard S., Rohlfing T., Rock S.M.,

Tin-Wollam A.-M., Abbott A., Minx P., Mauphin R., Strowmatt C.,

Wa Latreille P., Miller N., Johnson D., Murray J., Woessner J.P.,

Wa Latreille P., Miller N., Johnson D., Murray J., Woessner J.P.,

Wa Hilliams D., Bedell J.A., Mardis E.R.,

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RA Gillett W., Zhou Y., James R., Phelps K., Iadanoto S., Bubb K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIINE-96278713; PubMed-8662798; DOI=10.1074/jbc.271.22.13110; Cioce V., Csaky K.G., Chan A.M.-L., Bottaro D.P., Taylor W.G., Jensen R., Aaronson S.A., Rubin J.S.; "Hepatocyte growth factor (HGP)/NK1 is a naturally occurring HGF/scatter factor variant with partial agonist/antagonist action, Biol. Chem. 271:13110-13115(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "A functional domain in the heavy chain growth factor binds the c-Met receptor abut not mitogenesis.";
                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. (ISOFORM 1), AND VARIANTS LYS-304 AND TYR-330. Rieder M.J., Livingston R.J., Daniels M.R., Chung M.-W., Miyamoto K.E., Nguyen C.P., Nguyen D.A., Poel C.L., Robertson P.D., Schackwitz W.S., Sherwood J.K., Witrak L.A., Nickerson D.A.; "NIEHS W.S., Sherwood J.K., Witrak L.A., Nickerson D.A.; "NIEHS-SNPs, environmental genome project, NIEHS ES15478, Department of Genome Sciences, Seattle, WA (URL: http://egp.gs.washington.edu).";
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RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Schwastein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Robak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Pahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA Mhiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA RA Rakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA RA Rakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA RA Rakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grinwood J., Schmutz J., Myers R.M.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
"Generation and initial analysis of more than 15,000 full-length human
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Baertsch R.A., Brent M.R., K
Bailey J.A., Portnoy M.E., T
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Waterston R.H., Wilson R.K.;
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"Structural organization and the transcription human hepatocyte growth factor gene.";
Biochemistry 30:9170-9176(1991).
                                                                                                                                                                                                                                                                      high
EMBO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Yoshiyama Y., Arakaki N., Naka D., 'Nakayama H., Gohda E., Kitamura N., Hishida T., Daikuhara Y.;
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"The state of the N-terminal residue of the heavy
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                                             INE-98154323; PubMed-9493272; DOI=10.1016/S05

H., Mazzulla M.J., Kaufman J.D., Stahl S.J.,

n J.S., Bottaro D.P., Byrd R.A.;

solution structure of the N-terminal domain
or reveals a potential heparin-binding site."

cture 6:109-116(1998).
                                                                                                                                                                                                                                                                      affinity receptor binding.";
J. 11:2503-2510(1992).
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PubMed=12477932; DOI=10.1073/pnas.242603899;
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                                                                                                                                                                                                                                                                                                                                                                                                          PubMed=1321034;
M.R., Luis E.A.,
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D., Stahl S.J., Wingfield P.T.,
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                                                                            Liao A.T., Chien M.B., London C.A.; Submitted (FEB-2004) to the EMBL/GenBank/DDBJ-!- SIMILARITY: Belongs to peptidase family S1 EMBL; AB09353; BAC57550.1; -. EMBL; AY543632; AAS48570.1; -. EMBL; AY543632; AAS48570.1; -.
                                                                                                                                                                                                                                                                                               MEDLINE=22844761; PubMed=12963274; DOI=10.1016/S0165-2427(03)00118-1; Miyake M., Saze K., Yaguchi T., Wang J., Suzuta Y., Haga Y., Takahashi S.Y., Yamamoto Y., Iwabuchi S.; "Canine hepatocyte growth factor: molecular cloning and characterization of the recombinant protein."; Vet. Immunol. Immunopathol. 95:135-143(2003).
MEROPS; S01.982;
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GO; GO:0006508; P:proteolysis and peptidolysis; IE;
InterPro; IPR011359; HGF_MST1.
InterPro; IPR001001; Kringle.
InterPro; IPR003014; PAN.
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Pred. No. 6.5e
19; Mismatches
                                                                                                                                        Created)
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4E83F9EA8BFF6DB1
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                                                                                  sequence update)
annotation updat
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.5e-175;
.es 12;
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                                                                                     update)
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91 120 151 175

211

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Yamaji D., Kimura K., Watanabe A., Makondo K., Sa Submitted (MAY-2003) to the EMBL/GenBank/DDBJ dat III SIMILARITY: Belongs to peptidase family S1.

EMBL; AB110822; BAD02475.1; -.

HSSP; P08519; 1KIV.

G0; G0:0004263; F:chymotrypsin activity; IEA.

G0; G0:0008233; F:peptidase activity; IEA.

G0; G0:0008233; F:peptidase activity; IEA.

G0; G0:0006508; P:trypsin activity; IEA.

G0; G0:0006508; P:proteolysis and peptidolysis; IInterPro; IPR001359; HGF MST1.

InterPro; IPR003609; Pan_app.

InterPro; IPR001314; Peptidase_S1A.

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
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PRINTS; PRO0018; KRINGLE
PRODOM; PRO00035; KRINGLE;
PRODOM; PRO00130; KR; 4.
SMART; SM00473; PAN AP; 1.
SMART; SM00473; PAN AP; 1.
SMART; SM000201; KRINGLE 1; 4.
PROSITE; PS00021; KRINGLE 2; 4.
PROSITE; PS50070; KRINGLE 2; 4.
PROSITE; PS50248; PAN; 1.
PROSITE; PS50248; PAN; 1.
PROSITE; PS50248; PAN; 1.
PROSITE; PS50240; TRYPSIN DOM; 1.
PROSITE; PS50240; TRYPSIN DOM; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF00051; Kringle;
Pfam; PF00024; PAN; 1.
Pfam; PF00089; Trypsin;
PIRSF; PIRSF001152; HGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
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NCBI_TaxID=9913;
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa;
                                                                                                                                                                                                       332
                                                                                                                                                                                                                                                                                                                                                                                                                                     212
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FROM N.A.
CYTGNPLIPWDYCPISRCEGDTTPTIV
                                                                                                                                                                                                       QYPHEHDMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSHGQDC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MTCNGESYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WNSMIPHEHSFLPSSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WSSMIPHEH-----SYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ARKRCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGGSYKGTVSITKSGIKCQP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ARKQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OKKRRNTLHEFKRSAKTTLIKEDPLLKIKTKKMNTADQCANRCIRNKGLPFTCKAFVFDK
                                                                                                                   YRGNGKNYMGNLSQTRSGLTCSMWDKMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPW
                                                                                                                                                                                                                                                                                                                                                     YTLDPHTRWEYCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDS
                                                                                                                                                                                                                                                                                                                                                                                                                                     MTCNGESYRGPMDHTETGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGKPRPWC
                                                                                         YRGNGKNYMGSLSKTRSGLTCSMWDKNMEDLHRHIFWEPDATKLNKNYCRNPDDDAHGPW
                                                                                                                                                                                                                                                                                                                    YTLDPDTPWEYCAIKMCAHSTMNDTDLPMQTTECIQGQGEGYRGTINTIWNGIPCQRWDS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kringle;
730 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Protease; Serine
83357 MW; E39D65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chordata; Craniata; Vertebrata; Euteleostomi; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HGF_MST1;
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91.5%;
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Pred. No. 1.8e
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E39D653B0A85F49B CRC64;
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J databases.
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Best Local S
Matches 409
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GO; GO:0004263; F: chymotrypsin activity; IEA.
GO; GO:0004263; F: peptidase activity; IEA.
GO; GO:0004295; F: trypsin activity; IEA.
GO; GO:0004295; F: trypsin activity; IEA.
GO; GO:0006508; P: proteolysis and peptidolysis; IE.
InterPro; IPR001359; HGF MST1.
InterPro; IPR003014; PAN.
InterPro; IPR003014; PAN.
InterPro; IPR001359; Pan app.
InterPro; IPR001354; Peptidase S1.
InterPro; IPR001354; Peptidase S1.
InterPro; IPR001314; Paptidase S1.
InterPro; IPR001314; Paptidase S1.
InterPro; IPR001314; Paptidase S1.
InterPro; IPR00903; Paptidase S1.
InterPro; IPR00904; Paptidase S1.
InterPro; IPR
                                                                                                                                                                                                                                                                              PRINTS; PRO0722; CHYMOTRYPSIN.
PRINTS; PRO0018; KRINGLE.
PRODOM; PD000395; Kringle; 4.
SMART; SM00130; KR; 4.
SMART; SM00130; KR; 4.
SMART; SM00020; Tryp_SPc; 1.
SMART; SM00020; TRYBESI 1.
PROSITE; PS00070; KRINGLE 1; 4.
PROSITE; PS50070; KRINGLE 2; 4.
PROSITE; PS50070; TRYPSIN_DOM; 1.
PROSITE; PS50248; PAN; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
Hydrolase; Kringle; Protease; Sesequence 728 AA; 83067 MW; 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE=Liver;
Kobayashi Y.,
Tsujimoto H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Haga Y., Yamamoto Y., Takahashi S., J
Submitled (FEB-2002) to the EMBL/GenE
-- SIMILARITY: Belongs to peptidase
EMBL; AB0446610; BAB21499.1; --
EMBL; AB080187; BAC10545.1; --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kobayashi
Tsujimoto
Submitted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q9BH09;
Q9BH09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Felis silvestris catus (Cat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Carnivora; Fissipedia; Felidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Miyake M., Yaguchi
Haga Y., Yamamoto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
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121
                                                                                                                                                                                                       409;
                                         90
                                                                               61
                                                                                                                       30
                                                                                                                                                                                                                        Similarity
                                                                                                                     CYTGNPLIPWDYCPISRCEGDTTPTIV
  WSSMIPHEH - - -
                                                              ARKQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQP
                                         ARKRCLWFPFNSMTSGVKKEFGHEFDLYENKDYIRNCIIGKGGS
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                                                                                                                                                                                                       Conservative
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                                                                                                                                                                                                                                                                                     Protease; Serine protease.
83067 MW; 8D7F4A333D1E190A CRC64;
                                                                                                                                                                                                                        93.6%;
91.5%;
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Takahashi S., Iwabuchi S.;
to the EMBL/GenBank/DDBJ databases
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  -SYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVEC
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                                                                                                                                                                                                     Score 2414.5; DB 2
Pred. No. 3.7e-174;
1; Mismatches 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    annotation
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on update)
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                                              YKGTVSITKSGIKCQP
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                                                                    STRAIN=C57BL/6J; TISSUE=Thymus; MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100; Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.; "Normalization and subtraction of cap-trapper-selected cDN prepare full-length cDNA libraries for rapid discovery of Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Thymus;
MEDLINE=2108566J; PubMed=11217851; DOI=1
RIKEN FANTOM Consortium;
"Functional annotation of a full-length
Nature 409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Mus musculus 3 days neonate thymus cDNA, RIKEN full-length enriched
library, clone:A630060Cl6 product:hepatocyte growth factor, full
                                                                                                                                                                                                                                                                                                   "the RIKEN Genome Exploration Research "Analysis of the mouse transcriptome be 60,770 full-length cDNAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Thymus;
The FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nature
[3]
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SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Thymus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN=C57BL/6J; TISSUE=Thymus;
MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q8C9G5;
01-MAR-2003
                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Carninci P., Hayashizaki Y., "High-efficiency full-length cDNA cloning
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
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Rodentia;
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Sciurognathi;
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based o
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thi; Muridae;
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on functional
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Murinae; Mus
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annotation
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ROSTRAIN-C57BL/6J; TISSUE=Thymus;

RA Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P.,

RA Adachi J., Aizawa K., Hiramoto K., Hiraoka T., Hirozane T.,

RA Fukuda S., Furuno M., Hiramoto K., Hiraoka T., Hirozane T.,

RA Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T.,

RA Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T.,

RA Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S.,

RA Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M.,

RA Kurihara K., Numazaki R., Ohno M., Ohazto N., Okazaki Y.,

RA Nishi K., Nomura K., Numazaki R., Ohno M., Ohsato N., Sano H.,

RA Nishi K., Nomura K., Numazaki R., Shiraki T., Sogaba Y., Tagami M.

Raito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H.,

RA Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.

Ragawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,

RA Sasaki D., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,

RA Sasaki Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.,

LI Submitted (JUL-2001) to the EMBL/JenBank/DDBJ databases.

-!- SIMILARITY: Belongs to peptidase family S1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
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PRINTS; PRO0712; KYINGLE.

PRODOM; PD000195; KRINGLE; 4.

PRODOM; PD000195; KR; 4.

SMART; SM00110; KR; 4.

SMART; SM00020; TryP_SPC; 1.

PROSITE; PS00021; KRINGLE 1; 4.

PROSITE; PS50070; KRINGLE 2; 4.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MGD; MGI:96079; Hgf.
GO; GO:0008283; P:cell proliferation; IDA.
GO; GO:0000902; P:cellular morphogenesis;
InterPro; IPR011359; HGF MST1.
InterPro; IPR000001; Kringle.
InterPro; IPR003014; PAN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF00024; PAN; 1.
Pfam; PF00089; Trypsin; 1.
PIRSF; PIRSF001152; HGF MST1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro;
InterPro;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                               ERKRRNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDK
                                                                                                                                                                                       SRKRCYWYPFNSMSSGVKKGFGHEFDLYENKDYIRNCIIGKGGSYKGTVS
                                                                                                                                                                                                                                            ARKQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQP
MTCNGESYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWC
                                                                 WNSMI PHEHSFLPSSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDI PQCSEVEC
                                                                                                     WSSMIPHEH-----SYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVEC
                                                                                                                                                                                                                                                                                                                 QKKRRNTLHEFKKSAKTTLTKEDPLLKIKTKKVNSADECANRCIRNRGFTFTCKAFVFDK
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IPR001254; Peptidase_S1.
IPR001314; Peptidase_S1A.
IPR009003; Pept_Ser_Cys.
                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
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82990 MW;
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89.9%;
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8D5258DF3BCF3545 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                              19;
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   235
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RESULT 6
HGF_MOUSE
   TISSUE=Liver;

MEDLINE=94363381; PubMed=8081873;

Lee C.C., Kozak C.A., Yamada K.M.;

"Structure, genetic mapping, and expression of the mouse Hgf/scatter
"Structure, genetic mapping, and expression of the mouse Hgf/scatter
                                                                                                                                    hepatocyte growth factor.";
Biochim. Biophys. Acta 1216:299-303(1993).

-!- FUNCTION: HGF is a potent mitogen for mature parenchymal hepatocyte cells, seems to be an hepatotrophic factor, and growth factor for a broad spectrum of tissues and cell ty has no detectable protease activity.

-!- SUBUNIT: Dimer of an alpha chain and a beta chain linked disulfide bond.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE=Mammary fibroblast;
MEDLINE=94183257; PubMed=8135822;
Sasaki M., Nishio M., Sasaki T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q08048; Q61662; Q64007;
01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
25-OCT-2004 (Rel. 45, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hepatocyte growth factor precursor (Hepatopoeitin A).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HGF MOUSE
   <del>:</del>
                                                                                                                                                                                                                                                                             MEDLINE=94060105; PubMed=8241272; DOI=10.1016/0167-4781(93)90159-B; Liu Y., Michalopoulos G.K., Zarnegar R.;
                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sasaki M., Nishio M., Sasaki T., Enami J.;
"Identification of mouse mammary fibroblast-derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (Mouse)
                               ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           factor as hepatocyte growth factor."
                                                                                                                                                                                                                                               "Molecular cloning and characterization of cDNA encoding hepatocyte growth factor.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EQUENCE FROM N.A.
subfamily.
SIMILARITY: Contains 4 kringle domains
                              IsoId=Q08048-2; Sequence=VSP_005408; SIMILARITY: Belongs to the peptidase $\)
                                                              Name=Short
                                                                                            Name=Long;
                                                                                                       Event=Alternative
                                                                                                                          ALTERNATIVE PRODUCTS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             333
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                                                                            IsoId=Q08048-1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Res. Commun. 199:772-779(1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (ISOFORMS
                                                                          Sequence=Displayed;
                                                                                                         splicing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LONG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                         Named isoforms=2;
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                                 Plasminogen
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types. It
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Query Match
Best Local S
Matches 402
                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00051; Kringle; 4.

Pfam; PF00024; PAN; 1.

Pfam; PF00089; Trypsin; 1.

PIRSF PIRSF001152; HGF MST1; 1.

PRINTS; PR00722; CHYMOTRYPSIN.

PRINTS; PR00723; KRINGLE.

PRODOM; PF000395; KRINGLE.

PRODOM; PD000395; KRINGLE.

PRODOM; PD000395; KRINGLE.

PRODOM; PD000395; KRINGLE.

PRODOM; PR00010; KR; 4.

SMART; SM00070; Tryp SPC; 1.

PROSITE; PS00021; KRINGLE 1; 4.

PROSITE; PS50070; KRINGLE 2; 4.

PROSITE; PS50040; TRYPSIN DOM; 1.

PROSITE; PS50040; TRYPSIN DOM; 1.
                                                 CONFLICT
CONFLICT
CONFLICT
SEQUENCE
                                                                                                                         DISULFID
DISULFID
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
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                                                                                                                                                                                                                                                                                                  CHAIN
CHAIN
MOD_RES
                                                                                                                                                                                                                                                                                                                                        Serine
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR003609; Pan app.
InterPro; IPR009003; Pept Ser Cys.
InterPro; IPR001254; Peptidase S1.
InterPro; IPR001314; Peptidase S1A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; $71816; AAB31855.1; -.
EMBL; $72307; CAA51054.1; ALT_INIT
PIR; JC2117; A60185.
                                                                                                                                                                                                                                                                                                                                                                Alternative splicing; Direct protein sequencing; Glycoprotein; Growth factor; Kringle; Pyrrolidone carboxylic acid; Repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MGD; MGI:96079; Hgf.
GO; GO:00008283; P:cell proliferation; IDA.
GO; GO:0000902; P:cellular morphogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; D10212; BAA01064.1; -. EMBL; D10213; BAA01065.1; -.
                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR000001; Kringle.
InterPro; IPR003014; PAN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEROPS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HSSP; P14210; 1BHT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -!- SIMILARITY: Contains 1 PAN domain.
                                                                                                               VARSPLIC
  402;
                                                                                                                                                                                                                                                                                                                                                     protease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S01.982;
               Similarity
                                                  728
                                                                                                                                                                                      306
392
496
71
  Conservative
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295
403
569
656
163
                                                                                                                                                                                                                                                                                                     homolog;
32
3495
728
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                                                  344 N
479 V
564 R
82944 MW;
                                                                                                              124
207
289
384
470
728
97
728
607
295
403
569
656
              91.9%;
89.9%;
                                                                                                                                                                                                                                                                                                                                                   Signal.
                                              Interchain (By similarity).

N-linked (GlCNAc. .) (Potential).

Missing (in isoform Short).

/FTId=VSD_005408.

N -> K (in Ref. 2).

V -> L (in Ref. 2).

N -> H (in Ref. 3).

MW; A0381FC497534328 CRC64;
  21;
Score 2370.5;
Pred. No. 7.8e
21; Mismatches
                                                                                                                                                                                                                                                  Kringle
Kringle
                                                                                                                                                                                      Serine protease-like
By similarity
By similarity.
                                                                                                                                                                                                                                                                             PAN.
                                                                                                                                                                                                                                                                                         similarity).
                                                                                                                                                                                                                                                                                                     Hepatocyte growth factor alpha chain. Hepatocyte growth factor beta chain. Pyrrolidone carboxylic acid (By
                                                                                                                                                                                                                                                                                                                                          By similarity.
                                                                                                                                                                                                                            Kringle 4.
                                                                                                                                                                                                                                        Kringle
              5; DB 1;
.8e-171;
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                         <u>ب</u>
  Indels
                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a collaboration -
  υ
••
  Gaps
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SEQUENCE FROM N.A.

C STRAIN=Wistar; TISSUE=Liver;

X MEDLINE=91031482; PubMed=2146117;

X MEDLINE=91031482; PubMed=2146117;

A Okajima A., Miyazawa K., Kitamura N.;

A Okajima A., Miyazawa K., Kitamura N.;

Its mRNA during liver regeneration following hepatic injury.";

L Eur. J. Biochem. 193:375-381(1990).

-!- FUNCTION: HGF is a potent mitogen for mature parenchymal hepatocyte cells, seems to be an hepatotrophic factor, and a growth factor for a broad spectrum of tissues and cell types of the sno detectable protease activity.

-!- SUBUNIT: Dimer of an alpha chain and a beta chain linked by disulfade bond.

-:- SIMILARITY: Belongs to the peptidase S1 family. Plasminogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            r_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                              HGF_RAT STANDARD; PRT; 728 AA. P17945; O1-NOV-1990 (Rel. 16, Created) O1-NOV-1990 (Rel. 16, Last sequence update) 25-OCT-2004 (Rel. 45, Last annotation update) Hepatocyte growth factor precursor (Scatter f.
                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A., AND PARTIAL S
STRAIN-Wistar; TISSUE-Liver;
MEDLINE-90222197; PubMed=2119229;
                                                                                                                                                                                                                                                    "Deduced primary structure of expression of the mRNA in rat Proc. Natl. Acad. Sci. U.S.A.
                                                                                                                                                                                                                                                                                              Toshiro K., Hagiya M., N
Shimizu S., Nakamura T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hepatopoeitin A).
 subfamily.
SIMILARITY:
SIMILARITY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ARKQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQP
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                Contains
                                                                                                                                                                                                                                                                                                                                                                                               Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                             Nishizawa
                                                                                                                                                                                                                                                                                                                                                      PARTIAL SEQUENCE
 ₽
  kringle domains PAN domain.
                                                                                                                                                                                                                                                     rat hepatocyte grow
tissues.";
87:3200-3204(1990).
                                                                                                                                                                                                                                                                                                                                                                                              Craniata; Veri
Sciurognathi;
                                                             activity.
chain and a beta chain linked by
                                                                                                                                                                                                                                                                                                          Τ.
                                                                                                                                                                                                                                                                                                            Seki T.,
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                                                                                                                                                                                                                                                                                                                                                                                            Vertebrata; Euteleostomi;
thi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     factor)
                                                                                                                                                                                                                                                                                growth
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                                          Plasminogen
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                                                                                                                                                      injury.";
                                                                                                                                                                   induction
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WSSMI PHEH - - - -

WNSMI PHEHSFLPSSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDI PQCSEVEC

-SYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVEC

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Matches 399
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pfam; pro0028; Trypsin; 1.

pfam; pro0089; Trypsin; 1.

prinsf; pro0722; CHYMOTRYBSIN.

prints; pro0722; CHYMOTRYBSIN.

prints; pro0732; KRINGLE.

proDom; p0000395; Kringle; 4.

SMART; SM00130; KR; 4.

SMART; SM00130; KR; 4.

SMART; SM00020; Tryp_Spc; 1.

SMART; SM00020; Tryp_Spc; 1.

PROSITE; pS00070; KRINGLE 1; 4.

PROSITE; pS50070; KRINGLE 2; 4.

PROSITE; pS50948; PAN; 1.

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InterPro; IPR000001; K
InterPro; IPR003014; P
InterPro; IPR003609; P
InterPro; IPR001254; P
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EMBL; X54400; CAA38266.1;
PIR; A35644; A35644.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a che between the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fc entities requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00051;
Pfam; PF00024;
                                                                                                                                                                                                                                                                                                                                            SIGNAL
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 \omega
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S01.978; -.
                                                                Similarity
ERKRRNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDK
                                                                                                                  38
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496
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403
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496
33
                                                     Conservative
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PAN; 1.
                                                                                                       B
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82905
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495
728
33
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207
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; Pept_Ser_Cys.
; Peptidase_S1.
; Peptidase_S1A.
                                                                91.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kringle.
                                                                                                                                                                                                                                                                                                                                                        ing; Glycoprotein; Growth factor; Kringle;
acid; Repeat; Serine protease homolog; Signal.
                                                                                                       M
W
;
                                                 23;
                                                  Score 2363.5;
Pred. No. 2.6e
23; Mismatches
                                                                                                                 Interchain (By similarity).
N-linked (GlCNAC. . .) (Pott
N-linked (GlCNAC. . .) (Pott
N-linked (GlCNAC. . .) (Pott
N-linked (GlCNAC. . . ) (Pott
                                                                                                                                                                                                                       Kringle 1.
Kringle 2.
Kringle 3.
Kringle 4.
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By similarity.
By similarity.
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                                                                                                      N-linked (GlcNAc. . .) (
N-linked (GlcNAc. . . ) (
N-linked (GlcNAc. . . ) (
N-linked (GlcNAc. . . ) (
3EOBF1F96ADCEDFF CRC64
                                                                                                                                                                                                                                                                                        similarity).
                                                                                                                                                                                                                                                                                                    Pyrrolidone carboxylic acid (By
                                                                                                                                                                                                                                                                                                                                            similarity.
                                                              2363.5; DB 1;
No. 2.6e-170;
                                                                                                                                                                                                                                                                                                                                                       Serine protease
                                                                                                                                                                                                                                                                                                                   factor beta
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Best Loc
Matches
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Q90978; Q90866;
01-JAN-1998 (TIEMBLIEL 0
01-JAN-1998 (TIEMBLIEL 0
01-MAR-2004 (TIEMBLIEL 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dev.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=96029010; PubMed=7554499;
Thery C., Sharpe M.J., Batley S.J.,
"Expression of HGF/SF, HGF1/MSP and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata;
Archosauria; Aves; Neognathae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hepatocyte growth
Name=HGF/SF;
                                                                                                      y Match
Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ing early chick development.";
Genet. 17:90-101(1995).
SIMILARITY: Belongs to peptida
L; X84045; CAA58864.1; -.
; I51285; I51285.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _TaxID=9031;
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                                                                                al Similarity
336; Conser
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CYTGNPLVPWDYCPISRCEGDTTPTIV
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  KRRNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDKAR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MTCNGESYRGPMDHTESGKTCQRWDQQTPHRHKFLPERYPDKGFDDNYCRNPDGKPRPWC
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                                                                                78.1 ilarity 75.5 Conservative
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                                                                                Score 2014.5;
Pred. No. 6.5e
19; Mismatches
                                                                                                                                                                                    Serine protease.
5BD06CFB5C40B003 CRC64;
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.5e-144;
les 53;
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MEROPS; F1121, ACRIAN

MEROPS; S01.976; -.

GO; GO:0004263; F:chymotrypsin activity; IEA.

GO; GO:0004263; F:peptidase activity; IEA.

GO; GO:0004253; F:peptidase activity; IEA.

GO; GO:000425; F:trypsin activity; IEA.

GO; GO:0006508; P:proteolysis and peptidol-
Pfam; pF00024; PAN; 1.

Pfam; pF00024; PAN; 1.

Pfam; PF00029; Trypsin; 1.

PRINTS; PR00712; CHYMOTRYPSIN.

PRINTS; PR00712; CHYMOTRYPSIN.

PRINTS; PR00018; KRINGLE.

PRODOM; PD00035; KRINGLE.

PROSTITE; PS00021; KRINGLE 1; 4.

PROSTITE; PS00070; KRINGLE 2; 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; S77422; AAB34354.2; -HSSP; P14210; 1GMN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mech.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=95267690; PubMed=774871
Nakamura H., Tashiro K., Nakamu
"Molecular cloning of Xenopus I
Xenopus early embryogenesis.";
Mech. Dev. 49:123-131(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; (Amphibia; Batrachia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hepatocyte
Name=HGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE=Tailbud;
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iro K., Nakamura
ig of Xenopus HGF
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Best Local S
Matches 301
                 "A role for HGF/SF in neural induction an node during gastrulation.";
Development 121:813-824(1995).
EMBL; X80111; CAA56430.1; -.
HSSP; P00747; IKIO.
InterPro; IPR000001; Kringle.
InterPro; IPR003014; PAN.
InterPro; IPR003014; PAN.
InterPro; IPR00309; Pan_app.
Pfam; PF00051; Kringle; 4.
Pfam; PF00024; PAN; 1.
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Q788Q2;
05-JUL-2004
05-JUL-2004
                                                                                                                                                                                                         MEDLINE=95237013; PubMed=7720585;
Streit A., Stern C.D., Thery C.,
Sharpe M.J., Gherardi E.;
"A role for HGF/SF in neural indu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HGF/SF protein
Name=HGF/SF;
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PROSITE; PS50240; TRYPSIN_
Hydrolase; Kringle; Protea
SEQUENCE 710 AA; 81487
                                                                                                                                                                                                                                                                                                                                                                                                                                                Gallus
                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A. TISSUE=Liver;
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                                                                                                                                                                                                                                                                                                                                                                                                         Archosauria;
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ota; Metazoa; Chordata; (
auria; Aves; Neognathae;
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81487 MW;
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27, Last sequence update)
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27(Fragment).
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Pred. No. 5.6e
53; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata; Euteleostomi; Galliformes; Phasianidae; Phasiani
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Best Local S
Matches 284
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PROSITE; PS00021; KRINGLE 2; 3
PROSITE; PS50070; KRINGLE 2; 3
PROSITE; PS50948; PAN; 1.
Kringle; Signal.
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1 25
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05-JUL-2004
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LOC397993 pr
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SMART; S
MEDLINE-22388257; PubMed=12477932; DOI=10.1073/pnas.242603899; Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G. Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K. Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., Bietoleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C. Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C. Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy Bosak S.A., McEwan P.J., McKernan K.J., Marlek J.A., Gunaratne P. Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Villakon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
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SEQUENCE
                                                                                                                                                                                                                                      TISSUE=Spleen;
MEDLINE=22388257;
                                                                                                                                                                                                                                                                                                                                                                                                Xenopus laevis (African clawed
Eukaryota; Metazoa; Chordata; C
                                                                                                                                                                                                                                                                                                                                                                                                                                           LOC397993 protein.
Name=LOC397993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q6GP14;
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                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                    Amphibia; Batrachia;
Xenopodinae; Xenopus
                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=8355;
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SM00473; PAN
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84; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SMIPHEHSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVECMTCNGES
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Pred.
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No. 8
                                                                                                                                                                                                                                                                                                                                                                           Vertebrata; Euteleostomi; ia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .9e-122;
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                                                                                                                                                                                                                                                                                   Query Match
Best Local Sim
Matches 205;
                                                                                                                                                                                                                                                                                                                                                     Klein S., Strausberg R.;

Submitted (JUN-2004) to the EMBL/GenBank/DDE
EMBL; BC073334, AAH73334.1;

GO; GO:0005509; F:calcium ion binding; IEA.
GO; GO:0005509; F:chrombin activity; IEA.
GO; GO:0005509; P:blood coagulation; IEA.
GO; GO:0006508; P:proteolysis and peptidolys
InterPro; IPR003014; FAINgle.
InterPro; IPR003014; PAN
InterPro; IPR003609; Pan app.
InterPro; IPR003609; Pan app.
InterPro; IPR00366; Peptidase_SIA_pr.
FAINTS; PR00015; Kringle; 4.
Pfam; PF00021; Kringle; 4.
PFAMTS; PR00108; KRINGLE.
PRINTS; PR001305; Kringle; 4.
SMART; SM00130; KR; 4.
SMART; SM00130; KR; 4.
SMART; SM00173; PAN AP; 1.
RPOSITE; PS50070; KRINGLE 1; 4.
PROSITE; PS50070; KRINGLE 2; 4.
PROSITE; PS50948; PAN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE;
Kringle.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=22341132; PubMed=12454917; Klein S.L., Strausberg R.L., Wagner Richardson P.;
                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE=Spleen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              initiative."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Genetic and genomic tools for Xenopus research: The NIH Xenopus
                                                                   242
                                                                                            196
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                                                                                                                                          136
                                           256
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                                                                                                          SYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWCYTLDPH
                                                                                                                                          FPHDHKFSPIHMPDLEENYCRNPDSDPEGPWCYTTDKNIRHQYCGIKKCEDAVCLTCNGE
                                                                                                                                                        IPHEHSY---RGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVECMTCNGE
                                                                                                                                                                                                                                                             RNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDKARKQ
RFLPEKYPCKGLDENYCRNPDGSEAPWCFTTLPGMRMAYCFQIKRCKDDVLEPDCYHGNG
             DMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNC-DMSHGQDCYRGNG
                                            VEKEFCRITKCKKQRLSNIEI--
                                                        TRWEYCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDSQYPHEH
                                                                                           DYRGSVDRTESGKECQRWDLQTPHAHPYKPEKYPDKSLDDNYCRNPDSSERPWCYTTDPN
                                                                                                                                                                                       CRLLPWTQNSANVLLQRNVQYDLYQKKDYIRDCVVGNGNTYRGTVSKTKSGRTCQRWRLK
                                                                                                                                                                                                               CLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQPWSSM
                                                                                                                                                                                                                                      RSALNDYQRSKGLELVHMNNG-GVKQEIQSEIQVCAKQCSD----LLDCRSFVYNWKSQS
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                                                                                                                                                                                                                                                                                                                                    449
                                                                                                                                                                                                                                                                                   46.7%; ilarity 47.0%; Conservative 7.
                                                                                                                                                                                                                                                                                                                                    AA;
                                                                                                                                                                                                                                                                                                                                    52467 MW;
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to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                      74; Mismatches
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                                                                                                                                                                                                                                                                                                 Pred.
                                                                                                                                                                                                                                                                                                           Score 1204.5;
                                                                                                                                                                                                                                                                                                                                    5C2CE4B708E13D0B CRC64;
                                            -TSTCFKERGEGYRGKANTTTSGIPCQRWDSQTPQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            peptidolysis;
                                                                                                                                                                                                                                                                                                  No.
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r L., Pontius J., Clifton
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IEA.
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                                                                                                                                                                                                                                                                                      144; Indels
                                                                                                                                                                                                                                                                                                            DB 2;
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                                                                                                                                                                                                                                                                                                            Length 449;
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                                                                                                                                                                                                                                                                                      13;
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Best Local S
Matches 205
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GO; GO:0004263; F:chymotrypsin activity; IEA.
GO; GO:0008233; F:peptidase activity; IEA.
GO; GO:0003809; F:thrombin activity; IEA.
GO; GO:0004295; F:thrypsin activity; IEA.
GO; GO:0004295; F:trypsin activity; IEA.
GO; GO:0007596; P:blood coagulation; IEA.
GO; GO:0005508; P:proteolysis and peptidolysis;
Pfam; pF00051; Kringle; 4.
Pfam; PF00024; PAN; 1.
Pfam; PF00024; PAN; 1.
Pfam; PF00089; Trypsin; 1.
Pfam; PF00089; Trypsin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SMART; SM00130; KR; 4.

SMART; SM00473; PAN AF; 1.

SMART; SM00020; Tryp_SPc; 1.

PROSITE; PS00021; KRINGLE 1; 4.

PROSITE; PS50070; KRINGLE 2; 4.

PROSITE; PS50948; PAN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE; PS
Hydrolase;
SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q91691
Q91691;
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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea;
Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PR00018; KRINGLE.
PRINTS; PR01505; PROTHROMBIN.
ProDom; PD000395; Kringle; 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; U57455; AAB52574.1;
HSSP; P00746; 1FDP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ruiz i Altaba A., Thery C.;
Submitted (MAY-1996) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
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                                                 SYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWCYTLDPH
                                                                                                                                                                                                                                                                                     CLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQPWSSM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PS50240;
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DYRGSVDRTESGKECQRWDLQTPHAHPYKPEKYPDKSLDDNYCRNPDSSERPWCYTTDPN
                                                                                                                                                                              IPHEHSY - - - RGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVECMTCNGE
                                                                                                                                                                                                                                            CRLLPWTQNSANVLLQRNVQYDLYQKKDYIRDCVAGNGNTYRGTVSKTKSGRTCQRWRLK
                                                                                                                                                                                                                                                                                                                                                               RSALNDYQRSKGLELVHMNNG-GVKQEIQSEIQVCAKQCSD----LLDCRSFVYNWKSQT
                                                                                                                                                                                                                                                                                                                                                                                                                       RNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDKARKQ
                                                                                                                      FPHDHKFSPIHWPELEENYCRNPDSDPEGPWCYTTDKNIRHQYCGIKKCEDAVCLTCNGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kringle; Protease; Serine protease.
716 AA; 81971 MW; 508376A0E4398798 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
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Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
Last sequence update)
Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 1198.5; DB 2;
Pred. No. 3.2e-82;
5; Mismatches 148;
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                                                                                                                                                           Query Match
Best Local S
Matches 202
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GO: GO:0004263; F:chymotrypsin activity; IEA.
GO: GO:0008233; F:peptidase activity; IEA.
GO: GO:0008233; F:peptidase activity; IEA.
GO: GO:0004265; F:trypsin activity; IEA.
GO: GO:0006508; P:proteolysis and peptidol)
Pfam; pF00021; Kringle; 4.
Pfam; pF00023; PAN; 1.
Pfam; pF00028; Trypsin; 1.
PIRSF; PIRSF001152; HGF MST1; 1.
PRINTS; PR000722; CHYMOTRYPSIN.
PRINTS; PR00018; KRINGLE.
PRODOM; PD000395; Kringle; 4.
SMART; SM00473; PAN AP; 1.
SMART; SM00473; PAN AP; 1.
SMART; SM00473; PAN AP; 1.
SMART; SM00400; Tryp_SPC; 1.
PROSITE; PS50048; PAN; 1.
PROSITE; PS50948; PAN; 1.
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01-NOV-1996
01-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hepatocyte growth factor-like/
Name=HgFI/MSP;
Gallus (Chicken).
Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=96029010; PubMed=7554499; Thery C., Sharpe M.J., Batley S.J., "Expression of HGF/SF, HGF1/MSP and
                                                                                                                                                                                                                                                                                      Hydrolase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q90865
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Archosauria; Aves;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-MAR-2004
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            - SIMILARITY: Belongs to peptidase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genet.
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enet. 17:90-101(1995).
                                                                                                           v
                                                                                                                                                                                   Similarity
                                                                                                        RNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDKARKQ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RFLPEKYPCKGLDENYCRNPDGSEAPWCFTTLPGMRMAYCFQIKRCKDDVLEPDCYHGNG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNC-DMSHGQDCYRGNG
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     CLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQPWSSM
                                                     RSPLNDFQRLRGTELRAAPNEPPPSAPAHGAAQQCAQRCANRP----DCRAFHHERQSQL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PNTPFDYCAIKPCEGEKVLTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PLIPWDYCPISRCEGDTTPTI
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                                                                                                                                                                                                                                                              Kringle; Protease; 704 AA; 79341 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (TrEMBLrel. 01, Created)
(TrEMBLrel. 01, Last sequence update)
(TrEMBLrel. 26, Last annotation update)
growth factor-like/macrophage stimulating
                                                                                                                                                           45.9%; Sularity 45.1%; P. Conservative 72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Neognathae;
                                                                                                                                                           Score 1184; DI
Pred. No. 3.9e
72; Mismatches
                                                                                                                                                                                                                                                            Serine protease. CABOD8CC41367C37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Craniata; Vertebrata; Euteleostomi; Galliformes; Phasianidae; Phasiani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   441
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IEA.
                                                                                                                                                           ; DB 2;
3.9e-81;
hes 150;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IEA.
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                                                                                                                                                                                                                                                                 CRC64;
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                                                                                                                                                                                                         Length 704;
                                                                                                                                                              Indels
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                                                                                                                                                           Gaps
     124
                                                                                                        64
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                                                        75
RESULT 14
HGFL HUFLAN
HUFLAN
RA HAIN (1)
RA YOSH:
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                                                                                                                                                           Skeel A., Yoshimura
Leonard E.J.;
                                                                                                                                                                                                                                   602-611, AND S
TISSUE=Plasma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
TISSUE=Liver;
                                                                                                                                                                                                              PubMed=1827141;
                                                                                                                                                                                                                                                         SEQUENCE OF 230-247;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9606;
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HGFL HUMAN STANDARD; PRT; 711 AA.
PR6927; Q13350; Q14870;
01-AUG-1992 (Rel. 23, Created)
01-AUG-1992 (Rel. 23, Last sequence update)
25-OCT-2004 (Rel. 45, Last annotation update)
Hepatocyte growth factor-like protein precursor (Macrophage stimulatory protein) (MSP) (Macrophage stimulating protein)
Name=MST1; Synonyms=HGFL;
MEDLINE=93340141; PubMed=8393443; Yoshimura T., Yuhki N., Wang M.H., Skeel A., Leonard E.J.; Yoshimura T., Yuhki N., Wang M.H., Skeel A., Leonard E.J.; Toshimura T., Sequencing, and expression of human macrophage stimulating protein (MSP, MST1) confirms MSP as a member of the family of kringle proteins and locates the MSP gene on chromosome 3."; J. Biol. Chem. 268:15461-15468(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Han S., Stuart L.A., Friezner Degen S.J., 
"Characterization of the DNF15S2 locus on 
identification of a gene coding for four 
to hepatocyte growth factor.", 
Biochemistry 30:9768-9780(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=92002016; PubMed=1655021; Han S., Stuart L.A., Friezner Deg
                                                                                                           "Macrophage stimulating protein: sequence, and cellular activity.
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                                                                                                                                                                                      Ŧ.,
                                                                                                                                                                                                                                                                                            288-310; 326-341; 484-501;
                                                                                                                                                                                         Showalter
                                                                                                                                   purification,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         on human chromosome
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InterPro; IPRO00001; Kringle.
InterPro; IPRO030014; PAN.
InterPro; IPRO030019; Pan_app.
InterPro; IPRO03003; Pept Ser Cys.
InterPro; IPRO03003; Pept dase_S1A.
InterPro; IPRO01314; Peptidase_S1A.
InterPro; IPRO01314; Peptidase_S1A.
InterPro; IPRO03966; Peptidase_S1A.
InterPro; IPRO03966; Peptidase_S1A.
pfam; PF000051; Kringle; 4.
Pfam; PF000081; Kringle; 4.
Pfam; PF000081; Trypsin; 1.
PRINTS; PRO07152; HGF MST1; 1.
PRINTS; PR007152; HGF MST1; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PR00018; KRINGLE.
PRINTS; PR001505; PROTHROMBIN.
PRINTS; PR001505; PROTHROMBIN.
PRODOm; PD000395; Kringle; 4.
SMART; SM00120; KR; 4.
SMART; SM00120; Tryp SPC; 1.
SMART; SM00120; KR; 4.
PROSITE; PS00070; KRINGLE_2; 4.
PROSITE; PS00070; KRINGLE_2; 4.
PROSITE; PS50070; KRINGLE_2; 4.
PROSITE; PS50070; KRINGLE_2; 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; L11924; AAA59872.1; -
PIR; A40331; A47136.
HSSP; P00766; 1CHG.
MEROPS; S01.975; -
Genew; HGNC:7380; MST1.
MIM; 142408; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for comentities requires a license agreement (See http://www.isb-sib.ch/anor send an email to license@isb-sib.ch).
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DOMAIN
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PROSITE; PS50948; PAN; 1.
PROSITE; PS50240; TRYPSIN DOM; 1.
Direct protein sequencing; Glycop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; M74178;
EMBL; U37055;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PTM: May be cleaved after Arg-483, together by disulfide bonds, or tw SIMILARITY: Belongs to the peptida
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SIMILARITY:
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PTM: May l
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                                                                                                                                                                                                                                                                                               Serine
     Dimer
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AAC50471.1; -.
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Kringle 1.
Kringle 2.
Kringle 3.
Kringle 4.
Serine protease-like.
By similarity.
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                                                                                                                                                                                                                                                                                           log; Signal.
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     similarity).
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Best Local Sim
Matches 196;
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PRELIMINARY; PRT; 717 AA.
P70006;
P70006;
01-FEB-1997 (TrEMBLrel. 02, Created)
01-FEB-1997 (TrEMBLrel. 02, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Hepatocyte growth factor-like protein precursor.
Kenopus laevis (African Clawed frog).
Xenopus laevis (African Clawed frog).
Leukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea
Xenopudinae; Xenopus.
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CARBOHYD
               SEQUENCE FROM N.A.
TISSUE-Kidney, and Liver;
MEDLINE-96404125; PubMed-8808403; D
Aberger F., Schmidt G., Richter K.;
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                                                                                                                                                                                                                                                             FTFTSEPHAQLEENFCRNPDGDSHGPWCYTMDPRTPFDYCALRRCADDQPPSIL
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                                                                                                                                                                                                                                                                                 HIFWEPDASKINENYCRNPDDDAHGPWCYTGNPLIPWDYCPISRCEGDTTPTIV
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                                                                                                                                                                                                                                                                                                                                                         FRGKGEGYRGTANTTTAGVPCQRWDAQIPHQHRFTPEKYACKDLRENFCRNPDGSEAPWC
                                                                                                                                                                                                                                                                                                          FTLRPGMRAAFCYÓIRRCTDDVRPQDCYHGAGEQYRGTVSKTRKGVQCQRWSAETPHKPQ
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     hepatocyte
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E -> K (in dbsnp:7798).

FTId=VAR 014569.

R -> G (in Ref. 3).

C -> E (in Ref. 3).

R -> E (in Ref. 3).

PS -> SL (in Ref. 3).

PS -> SL (in Ref. 3).

W -> E (in Ref. 3).
                                                                                                                                                  Last sequence update)
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By similarity.
By similarity.
By similarity.
N-linked (GlcNAc...
N-linked (GlcNAc...
N-linked (GlcNAc...
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Pred. No. 3.8e-80;
0; Mismatches 148
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                                                                                                               Craniata; Vertebrata; Euteleostomi;
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                            DOI=10.1016/0925-4773 (95) 00458-0;
     growth
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                                                                                                    Pipoidea; Pipidae;
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149 165 209

388

225 269 283 283 329 343

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AT specifically expressed in the presumptive neural plate during gastrulation.";

Mach. Dev. 54:33-37(1996).

REMBLY Y08734; CAA69989.1; -.

RMEDOPS; S01.977; -.

RMEROPS; S01.977; -.

RGO; GO:0004263; F:chymotrypsin activity; IEA.

RGO; GO:0004295; F:trypsin activity; IEA.

RINTerPro; IPRO30159; HGF MST1.

RINTERPRO; IPRO3011359; HGF MST1.

REPROME PRO0024; PAN; II.

REPROME PRO0039; REPROMENIN.

REPROME PRO0039; REPROMENIN.

REPROME PRO0039; RETURGLE.

REPRINTS; PRO0130; KRINGLE.

REPRINTS; PRO0130; KRINGLE.

REMART; SM00130; KR; 4.
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Matches 199; Conserv
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SMART; SM000473; PAN AP; 1.

SMART; SM00020; Tryp_SPc; 1.

PROSITE; PS00021; KRINGLE 1; 4.

PROSITE; PS50070; KRINGLE—2; 4.

PROSITE; PS50948; PAN; 1.

PROSITE; PS50948; PAN; 1.

PROSITE; PS50240; TRYPSIN DOM; 1.

PROSITE; PS50240; TRYPSIN DOM; 1.

PROSITE; PS50240; Protease; Serine protease; Signal.

Hydrolase; Kringle; Protease; Serine protease; Signal.

SIGNAL

1 29 Potential.
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                               361 KNYMGNLSQTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPWCYTGN
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  384
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                                                                                                     RFLPEKYPCKGLDENYCRNPVGSEAPWCFTTLKNMRMAYCFQIKRCTDDVVEPECYHGNG
                                                                                                                                                                                                              VEREFCHITKCKKQRISNIEI---TSTCFKERGEGYRGKANTTTSGIFCQRWDTQAPHVH
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  ELYRGRVSKTRKGIMCRRWEEKQNDLELSLA-QPYLVPLEENYCRNPDRDSHGPWCYTMD
                                                                                                                                       DMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNC-DMSHGQDCYRGNG
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717 AA; 82017 MW;
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hepatocyte growth factor-like protein.
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        PLIPWDYCPISRCEGDTTPTI
PNTPFDYCALKPCAGDKVLTL
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Minimum DB seq
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1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
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first 45 s
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(c) 1993 - 2005
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Compugen Ltd.
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AAR40862	AAR20005	AAR25676	AAU04275	AAB45838	AAY59030	AAY98485	ADM83266	ADE37393	AAR32710	AAW59923	AAR21142	AAY57174	ADD69672	AAY06622	AAY06621	AAW76690	AAR82685	AAR57026	AAR57028	AAR57027	AAR25677	AAR15624	AAR07144	ADM83267	ID	
Aar40862 Competati	Aar20005 Human hep	Aar25676 Recombina	Aau04275 Nuclear 1	Aab45838 Nucleic a	0	Aay98485 Hepatocyt	Adm83266 Human NK4		Aar32710 Haematopo	Aaw59923 Human leu	Aar21142 Human TCF	Aay57174 N-termina	Add69672 Chimeric	Aay06622 HGF-MSP h	Aay06621 HGF-MSP h	Aaw76690 Human pla	Aar82685 Tumour cy	Aar57026 Human wil	Aar57028 Human mod	Aar57027 Human mod	7	Aar15624 Human leu	Aar07144 Tumour cy	Adm83267 Human NK4	ption	

The present invention provides a therapeutic agent NK4 polypeptides and their encoding polynucleotides. The invention is useful for producing a medicament for preventing or treating diseases caused by neovascularisation such as ovarian cancer, panoreatic cancer, stomach cancer, gallbladder cancer, renal cancer, prostatic cancer, breast cancer, gallbladder cancer, hepatic cancer, oral cavity cancer, colon cancer, colorectal cancer, sarcoma, glioma and melanoma. The invention is also useful in gene therapy. The present sequence is human NK4 protein.

18

Disclosure; Page 17-19; 27pp; English.

N-PSDB; ADM83265.

treating New NK14

gene, useful for producing a medicament for preventing diseases caused by neovascularization, e.g. cancer.

or

45	44	43		41	40		38	37	36	35	34	ω ω	32	31	30	29	28	27	26
2557.5	2557.5	2561.5	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5
	99.2	99.3		99.4		99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4
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AAR15623	AAR10656	AAY57173	ADS19044	ADT89322	ADM97652	ADB61534	ABP58128	AAW39207	AAW42998	AAW58696	AAW59922	AAW00338	AAW00340	AAR87523	AAR87525	AAR87524	AAR87522	AAR42062	AAR40863
Aar15623	Aar10656	Aay57173	Ads19044	Adt89322	Adm97652	Adb61534	Abp58128	Aaw39207	Aaw42998	Aaw58696	Aaw59922	Aaw00338	Aaw00340	Aar87523	Aar87525	Aar87524	Aar87522	Aar42062	Aar40863
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                      WPI; 1990-304990,
P-PSDB; AAR07144.
                                                                                             Higashio K,
                                                                                                                                                                                        10-MAR-1989;
16-JAN-1990;
                                                                                                                                                                                                                                                                10-MAR-1989;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tumour cytotoxic factor II
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31-JAN-1991
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                                                                                                                                            (SNOW)
                                                 1990-304990/40
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90JP-00006692.
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                                                                                                Itagaki Y,
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                                                                                                                                               25-MAR-2003
18-MAR-1992
                                                                                                                                                                                                                                AAR15624 standard; protein;
                                               Homo sapiens
                                                                                Hepatocyte
                                                                                                                Human leukocyte-derived HGF
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                                                                                                                                                                                                                                                                                                                                      PLIPWDYCPISRCEGDTTPTIV 442
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(first entry)
                                                                                  factor;
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99.8%;
                                                                                  liver; hepatoma
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Pred. No. 1.4e-163;
1; Mismatches 0;
                                                                                                                encoded by clone
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RESULT 4
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Best Local S
Matches 441
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
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Sakaguchi M,
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                                                                     PLIPWDYCPISRCEGDTTPTIV
                                                                                                                        KNYMGNLSQTRSGLTCSMWDKNMEDLHRHI FWEPDASKLNENYCRNPDDDAHGPWCYTGN
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Asami O;
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.4e-163;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; Page 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Recombinant human hepatocyte growth factor and DNA encoding it - useful for diagnosis and treatment of hepatic disease and transgenic animal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HGF; enhance growth clinical diagnostic
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             KNYMGNLSQTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPWCYTGN
                                                                                            HTRWEYCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDSQYPHE
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Pred. No. 1.4e-163;
1; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      biological activity.
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oligosaccharide chain - have
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19-MAR-1995
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                 HDMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSHGQDCYRGNG
                                                                                    HTRWEYCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDSQYPHE
                                                                                                                                                      ESYRGLMDHTESGKI CQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWCYTLDP
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                                                                   HTRWEYCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDSQYPHE
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Pred. No. 1.4e-163;
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Query Match
Best Local S
Matches 441
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Pred. No. 1.4e-163;
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                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 441; Conser
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                                                                                                                                                                                                                                                                          Sequence
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Takahira R,
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                                                This sequence represents human tumour cytotoxic factor-II (TCF-II). TCF-II I has potent antitumour activity and growth stimulation activity. TCF-II is a member of the hepatocyte growth factor family (HGF). This sequence is used as an antigen to produce TCF-II specific antibodies that show no affinity to human HGF. The monoclonal antibody (MAb) was produced using hybridoma techniques. The MAbs were screened using solid phase ELISA with an increased selectivity. The MAb can be used for the selective determination or purification of TCF-II without any influence from the presence of HGF. The TCF-II can be used as an antitumour agent, a wound healing agent and as a marker for the diagnosis of diseases
                                                                                                                                                                                                                                                                                                                                                                                                             Monoclonal antibody to human tumour cytotoxic factor-II to human hepatocyte growth factor, is used for specific purification of TCF-II.
     Sequence
                                                                                                                                                                                                                                                                                                                                                         Disclosure; Page 14-17; 19pp; English
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Best Local Similarity
Matches 441; Conserv
                     N-PSDB; AAV61952
                                      WPI; 1998-567711/48
                                                                                                                                                                                    05-MAY-1994;
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29-JAN-1999
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                                                                                                               DEPT HEALTH & HUMAN SERVICES
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                                                                          Rubin JS,
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variant; wound
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FFXSXCCCCXSXPPF
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Stimulation of endothelial or epithelial cell growth - like growth factor protein.
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PLIPWDYCPISRCEGDTTPTIV
                                                            KNYMGNLSQTRSGLTCSMWDKNWEDLHRHIFWEPDASKLNENYCRNPDDDAHGPWCYTGN
                                                                                                                                                                                            HTRWEYCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDSQYPHE
                                                                                                                                                                                                                                                        ESYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWCYTLDP
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                                                                                                                                                                                                                                                                                                                                                                                                                                   QRKRRNT1HEFKKSAKTTL1K1DPALK1KTKKVNTADQCANRCTRNKGLPFTCKAFVFDK
                                           KNYMGNLSQTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPWCYTGN
                                                                                                                                                                          HTRWEYCAIKTCADNTWNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDSQYPHE
                                                                                                                                                                                                                                        ESYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWCYTLDP
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Pred. No. 1.
               442
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1.4e-163;
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Homo sapiens.
Synthetic.
                                                                                                                                          Alphabet-1; human; hepatocyte growth factor; HGF; MSP; macrophage stimulating protein; apoptosis; chemotherapy;
                                                                                                                                                                                                                   26-OCT-1999
                                                                                                                                                                                                                                                                         AAY06621
            Peptide
                                                                                                                              therapy
                                                                                                                                                                                       HGF-MSP hybrid
                                                                                                                                                                                                                                                                         standard;
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                                                                                                                                                                                       protein alphabet-1 factor.
                           /note=
                                          Location/Qualifiers
1. .487
                                                                                                                                                                                                                                                                         protein;
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                            "HGF
"HSP alpha signal peptide"
                            alpha chain"
                                                                                                                                                                                                                                                                            729
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                                                                                                                                                toxicity;
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PLIPWDYCPISRCEGDTTPTIV

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Query Match
Best Local Simi
Matches 441;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      proteins are used for the prevention or treatment of chemotherapeutic-induced toxicity such as myelotoxicity, hepatotoxicity, nephrotoxicity, mucotoxicity and neurotoxicity (claimed). They protect cells from death (apoptosis) induced by chemotherapy of, e.g. tumors. In particular, they can be used for expansion of marrow precursors, to increase proliferation of the haematopoietic precursors or to stimulate their entry in the cycle. By modification of the proteolytic site, hybrid factors can be obtained which are activated by proteases of the endoplasmic reticulum (such as furines) during their synthesis. When the proteolytic site is removed, permanently immature forms of the factors can be obtained, having a potential partial agonistic or antagonistic activity. Different functional domains can be combined so as to modulate the biological
                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 729 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and thereby induce biological responses which are synergistic and selective compared with the natural factor and truncated forms of the proteins. The portions of DNA encoding the various portions of alphabet-1 are obtained by PCR amplification of HGF or MSP cDNA and recombined to obtain a hybrid DNA (see AAX87676). Expression vectors, prokaryotic or eukaryotic host cells and a process for preparing recombinant proteins from HGF and MSP are claimed. Alphabet-1 and other HGF-MSP recombinant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This is the amino acid sequence of alphabet-1 factor, a recombinant protein composed of the hepatocyte growth factor (HGP) alpha chain (i.e. protein composed of the hepatocyte growth factor (HGP) alpha chain (i.e. the signal sequence, hairpin loop grotein (MSP) beta chain and a site of HGF, the macrophage stimulating protein (MSP) beta chain and a polyhistidine tag sequence. This structure allows the recombinant protein to interact with both the HGF receptor (Met) and the MSP receptor (Ron)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 1; Page 54-56; 63pp; English
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                                                                                                                                                                                                                                           ERKRRNT I HEFKKSAKTTL I KI DPALKI KTKKVNTADQCANRCTRNKGL PFTCKAFVFDK
                                 WSSMI PHEHSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDI PQCSEVECMTCNG
                                                                                                                            ARKOCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCOP
                                                                                                                                                                                                          QRKRRNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDK
                                                                                          ARKQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQP
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                                                                                                                                                                                                                                                                                                                             Conservative
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488. .4
/note=
492. .7
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/note= "MSP beta chain"
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                                                                                                                                                                                                                                                                                                                    Score 2576; DE Pred. No. 1.4e-1; Mismatches
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No. 1.
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1.4e-163;
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Recombinant proteins from recombination of HGF and MSP structural domains, useful for protecting cells against apoptosis induced by
                                   WPI; 1999-494091/41.
N-PSDB; AAX87677.
                                                                                                                                          28-JAN-1999;
                                                                                                                                                                                                                         Peptide
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Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                               Alphabet-RTKR; human; hepatocyte growth factor; HGF; MSP; macrophage stimulating protein; apoptosis; chemotherapy; toxicity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HGF-MSP hybrid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAY06622 standard;
                                                                                                                   30-JAN-1998;
                                                                                                                                                                                       WO9938968-A1
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                                                                                                                                                                                                                                                                     /note= "furine protease cleavage site"
488. .491
                                                                                                                                                                                                                         /note= "MSP beta chain"
718. .729
                                                                                                                                                                                                                                                                                             484. .487
                                                                                                                                                                                                             /note= "polyhistidine tag"
                                                                                                                                                                                                                                                          /note=
                                                                                                                                                                                                                                                                                                                                                     /note= "HGF alpha chain"
                                                                                                                                                                                                                                                                                                       note=
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Pred. No. 1.4e-163;
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Best Local Similarity
Matches 441; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                      nanoparticles and capable of recognising specific cells which is fused with therapeutic substances for transfer into cells. The protein is particularly hepatitis B virus (HBV) surface antigen protein (HBsAg). The drugs of the invention demonstrate hepatotropic activity and may be useful for disease treatment, particularly in the therapy of liver diseases. The protein of the invention and subsequently the drug, has selectivity and specificity in trargeting cells or tissues for delivering drugs fused with the specific nanoparticle-forming proteins, therefore, gene therapy can be achieved without needing surgery and with reduced side-effects. The current sequence is that of the chimeric HGF/HBsAg L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Drugs comprising protein to form hollow nanoparticles with therapeutic substances encapsulated capable of recognizing target cells or tissues specifically and selectively, applicable in disease treatment.
                                                                                                                                                                                                                                                                                                                                                             Sequence 1109
                                                                                                                                                                                                                                                                                                                                                                                            protein (SEQ ID 20)
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Hepatitis B virus.
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liver disease; gene t
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                                                      ESYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWCYTLDP
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   HTRWEYCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDSQYPHE
                                    ESYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWCYTLDP
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Pred. No. 2.2e-163;
1; Mismatches 0;
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HGF.
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                        macular degeneration and excess scarring during wound healing), as a contraceptive, to modulate abnormal proliferation or vascularization (e.g. psoriasis, Osler-Webber syndrome, myocardiac angiopoiesis of the eye, angiofibroma, benign tumor and wound granulation), or to treat or prevent conditions due to the over-stimulation of endothelial cells (e.g. Crohn's conditions and to the over-stimulation of endothelial cells (e.g. Crohn's conditions).
                                                                                                                                                                                                                                The invention relates to neovascularization inhibitors comprising a polypeptide (A) with the amino acid sequence of N-terminal region of hepatocyte growth factor (HGF), or a polypeptide with an amino acid sequence derived from (A) which has antagonistic activity against HGF via the cMet-HGF receptor. The polypeptides can be used as neovascularization inhibitory factors (e.g. for preventing and treating rhemmatoid arthritis, diabetic conjunctivitis, neonatal conjunctivitis, senile
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cMet-HGF receptor; rheumatoid arthritis; diabetic conjunctivitis; neonatal conjunctivitis; senile macular degeneration; scarring; mutant wound healing; contraceptive; vascularization; Crohn's disease; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11-FEB-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            for preventing or treating,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              04-NOV-1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Page 69-72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    receptor; rheumatoid arthritis; diabetic conjunc
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   scarring).
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130. .1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         inhibitory factors and neovascularization inhibitors, treating, e.g. rheumatoid arthritis and diabetic
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The present sequence represents the
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   N-terminal
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RESULT 14
AAR21142
ID AAR211
XX AAR21
XX AAR21
XX 25-MA
DT 25-MA
DT 20-MA
XX Tumou
XX Tumou
XX Homo
XX Homo
XX Homo
XX Homo
XX W0920
XX W920
XX W920
XX 13-JU
XX 13-JU
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Best Local
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            Shima N,
                                                                                                                                                                                                                      Tumour cell killing
                                                                                                                                                                                                                                             Human TCF-II.
                                                                                                                                                                                                                                                                  25-MAR-2003
20-MAY-1992
                                                                                                                                                                                                                                                                                                    AAR21142;
                                                                                                                                                                                                                                                                                                                           AAR21142 standard;
                                                                               13-JUL-1990;
                                                                                                      23-JAN-1992
                                                                                                                            WO9201053-A
                                                                                                                                                             Region
                                                                                                                                                                                               Homo sapiens
                                 SNOW ) SNOW BRAND MILK PROD CO
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N
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                                                                                                                                                                                                                                                                                                                                                                                                      LIPWDYCPISRCEGDTTPTIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RKQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQPW
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                                                                                                                                                                                                                                                                                                                                                                                                                                                NYMGNLSQTRSGLTCSMWDKNMEDLHRHI FWEPDASKLNENYCRNPDDDAHGPWCYTGNP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWCYTLDPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SSMIPHEHSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVECMTCNGE
                                                                                                                                                                                                                                                                                                                                                                                     LIPWDYCPISRCEGDTTPTIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSHGQDCYRGNGK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TRWEYCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDSQYPHEH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RKQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQPW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RKRRNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDKA
                                                                                                                                                                                                                                                                                                                                                                                                                                 NYMGNLSQTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPWCYTGNP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSHGQDCYRGNGK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TRWEYCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDSQYPHEH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWCYTLDPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SSMI PHEHSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDI PQCSEVECMTCNGE
          Higashio
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                                                                               90JP-00185852
                                                                                                                                                            Location/Qualifiers
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            ζ,
                                                                                                                                                                                                                                                                                                                           protein;
                                                                                                                                                                                                                      factor;
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            Nagao M,
                                                                                                                                                 "Beta-chain N-terminal
                                                                                                                                                                                                                      hepatocyte
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Pred. No. 1.
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            Oogaki F,
                                                                                                                                                                                                                     growth
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             Takaoka
                                                                                                                                                  sequence"
                                                                                                                                                                                                                      factor
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RESULT 15
AAW59933
ID AAW59
XX AAW59
XX AAW59
XX 25-MA
DT 25-MA
DT 21-DE
XX Human
XX Hepat
KW Hepat
KW thera
XX Yen
OS Homo
XX PN EP859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local (
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                                                                                                                                 Human leukocyte-derived hepatocyte growth factor HCL2
                                                                                                                                                                         25-MAR-2003
21-DEC-1998
                                                                                                                                                                                                                                  AAW59923;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Prodn. of liver cell growth factor TCF-II - by culture of a transformant contg. cdna for tcf-11 and deriving from human foetal lung fibroblast
                                       Homo sapiens
                                                                                              Hepatocyte-derived
                                                                                                                                                                                                                                                                     AAW59923 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1992-056868/07.
DB; AAQ21066.
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Pred. No. 2.3e
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Best Local S
Matches 439
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Sakaguchi M,
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07-JUN-1991;
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1: /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*

2: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*

3: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*

4: /cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep:*

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6: /cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep:*

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9: /cgn2_6/ptodata/2/pubpaa/US09A_PUBCOMB.pep:*

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27: /cgn2_6/ptodata/2/pubpaa/US10C_PUBCOMB.pep:*
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ALIGNMENTS

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                                                                                                                                                                                                                                                                                     APPLICANT: NAKAMURA Toshikazu
APPLICANT: WATSUMOTO KUNIO
APPLICANT: WATSUMOTO KUNIO
APPLICANT: PUKUTA Kazuhiro
ITILE OF INVENTION: A segment of glycosylation-deficient HGF alpha-chain
FILE REFERENCE: 2004-1328A/WMC/01736
CURRENT APPLICATION NUMBER: US/10/926,088A
CURRENT FILING DATE: 2004-08-26
NUMBER OF SEQ ID NOS: 6
SEQ ID NO 2
LENGTH: 489
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 2, Application US/10926088A Publication No. US20050164918A1 GENERAL INFORMATION:
                                                                                                                                 Query Match 99.1
Best Local Similarity 99.1
Matches 441; Conservative
                                                                                                                                                                                                                                                        ORGANISM: Homo Sapiens FEATURE:
                                                               92
                     61 ARKQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQP
ARKQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQP
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Pred. No. 9.6e-210;
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FILE REFERENCE: 2520-0101P
CURRENT APPLICATION NUMBER: US/08/605,221
CURRENT FILING DATE: 1996-03-15
NUMBER OF SEQ ID NOS: 4
SOPTWARE: PatentIn Ver. 2.1
SEQ ID NO 4
LENGTH: 723
TYPE: PRT
ORGANISM: Homo sapiens
OTHER INFORMATION: HGF-B (five amino acids
US-08-605-221-4
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US-08-605-221-4
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Publication No. US20030060403A1
GENERAL INFORMATION:
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TITLE OF INVENTION: THERAPEUTIC AGENT FOR DISORDER IN BRAIN AND NERVE
FILE REFERENCE: 2520-0101P
                                                                                                                                                                                                                                                                                                                                                         Local Similarity
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Pred. No. 1.5e-209;
1; Mismatches 0;
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FILE REFERENCE: P023P01/US
CURRENT APPLICATION NUMBER: US/10/509,247A
CURRENT FILING DATE: 2004-09-28
PRIOR APPLICATION NUMBER: PCT/JP03/02602
PRIOR APPLICATION NUMBER: PCT/JP03/02602
PRIOR APPLICATION NUMBER: D2002-97280
PRIOR FILING DATE: 2003-03-29
NUMBER OF SEO ID NOS: 20
SOFTWARE: PatentIn version 3:3
SEQ ID NO 20
LENGTH: 1109
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US-10-509-247A-20
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Best Local Similarity
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APPLICANT: Tada, Hiroko

APPLICANT: Tada, Hiroko

TITLE OF INVENTION: DRUG CONTAINING HOLLOW PROTEIN NANOPARTICLES OF PARTICLE-FORMING

TITLE OF INVENTION: PROTEIN, FUSED WITH DISEASE-TREATING TARGET-CELL-SUBSTANCE
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APPLICANT: Kuroda, Shunichi
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ORGANISM: Artificial Sequence
FEATURE:
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Kondo, Akihiko
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Pred. No. 2.6e-209;
1; Mismatches 0;
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RESULT 5
US-10-081-309-2
; Sequence 2, Application US/10081309
; Publication No. US20030012775A1
; GENERAL INFORMATION:
; APPLICANT: Hoffmann-La Roche Inc.
; TITLE OF INVENTION: PEG Conjugates of NK4
; FILE REFERENCE: 20859
; CURRENT APPLICATION NUMBER: US/10/081,309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: JP 300728
PRIOR FILING DATE: 1995-10-24
PRIOR PPLICATION NUMBER: PCT/JP96/03105
PRIOR FILING DATE: 1996-10-23
PRIOR APPLICATION NUMBER: US 09/471,032
PRIOR FILING DATE: 1999-12-23
NUMBER OF SEQ ID NOS: 1
SOFTWARE: Patentin version 3.1
SEQ ID NO 1
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US-09-951-629-1
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APPLICANT: NAKAMURA, Toshikazu
TITLE OF INVENTION: Anti-Cancer Agent
FILE REFERENCE: 4373-0101P
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Best Local Similarity 98.7
Matches 441; Conservative
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CURRENT FILING DATE: 2001-09-14
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TYPE: PRT
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Sequence 1, Application US/10926088A

Publication No. US20050164918A1

GENERAL INFORMATION:
APPLICANT: MATSUMOTO Kunio
APPLICANT: MATSUMOTO Kunio
APPLICANT: FUKUTA Kazuhiro
TITLE OF INVENTION: A segment of glycosylation-deficient HGF alpha-chain
FILE REFERENCE: 2004-1328A/WMC/01736
CURRENT APPLICATION NUMBER: US/10/926,088A
CURRENT FILING DATE: 2004-08-26
NUMBER OF SEQ ID NOS: 6
SEQ ID NO 1
LENGTH: 494
TYPE: PRT
ORGANISM: Homo Sapiens
FEATURE:
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                                                                ; OTHER INFORMATION: alpha-chain of human hepatocyte growth factor
US-10-926-088A-1
                                                                                                                                                                                                                                                                                                                                             RESULT 6
US-10-926-088A-1
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   Query Match
Best Local S
Matches 441
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NUMBER OF SEQ ID NOS:
SOFTWARE: PatentIn verseq ID NO 2
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                 Local Similarity
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Score 2563.5; DB 16
Pred. No. 1.1e-208;
Pred. No. 1.1e-208;
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Pred. No. 9.96
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; NUMBER OF SEQ ID NOS: 149
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 120
; LENGTH: 726
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-872-198-120
B 5
                                                                                                                                                                                                                                                                                                     APPLICANT: CHISTER SCHELLER
APPLICANT: Ulrich Kettling
TITLE OF INVENTION: NEW BIOLOGICAL ENTITIES AND
FILE REFERENCE: 04156,0002U4
CURRENT APPLICATION NUMBER: US/10/872,198
CURRENT FILING DATE: 2004-06-18
PRIOR FILING DATE: 2004-02-11
PRIOR FILING DATE: 2004-02-11
PRIOR FILING DATE: 2003-11-25
PRIOR FILING DATE: 2003-11-25
PRIOR APPLICATION NUMBER: 60/524,960
PRIOR FILING DATE: 2003-11-15
PRIOR APPLICATION NUMBER: EP 04003058
PRIOR FILING DATE: 2003-11-11
PRIOR APPLICATION NUMBER: EP 03025871
PRIOR FILING DATE: 2003-11-10
PRIOR FILING DATE: 2003-11-10
PRIOR APPLICATION NUMBER: EP 03025851
PRIOR FILING DATE: 2003-06-18
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US-10-872-198-120
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                                                                                 Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Ulrich HAUPTS
APPLICANT: Andre KOLTERMANN
APPLICANT: Andreas SCHEIDIG
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                              QYPHEHDMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSHGQDC
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      QRKRRNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDK
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                                                                                     Conservative
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                                                                                 Score 2563.5; DB 1
Pred. No. 1.8e-208;
1; Mismatches 0;
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                                                                         ; ORGANISM: Homo sapiens US-11-021-951-120
                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/11/021,951
CURRENT FILING DATE: 2004-12-22
PRIOR APPLICATION NUMBER: 10/872,198
PRIOR FILING DATE: 2004-06-18
PRIOR PILING DATE: 2004-02-11
PRIOR PPLICATION NUMBER: 60/524,960
PRIOR PPLICATION NUMBER: 60/524,960
PRIOR PPLICATION NUMBER: 60/524,960
PRIOR PILING DATE: 2003-11-25
PRIOR PILING DATE: 2003-11-25
PRIOR PILING DATE: 2003-11-17
PRIOR PILING DATE: 2003-11-17
PRIOR PILING DATE: 2003-11-11
PRIOR APPLICATION NUMBER: EP 03025871
PRIOR PILING DATE: 2003-11-11
PRIOR PILING DATE: 2003-11-11
PRIOR APPLICATION NUMBER: EP 03025851
PRIOR PILING DATE: 2003-06-18
PRIOR PILING DATE: 2003-06-18
NUMBER OF SEQ ID NOS: 191
PRIOR PILING DATE: 2003-06-18
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US-11-021-951-120
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                                                                                                        SOFTWARE: PatentIn version 3.1
SEQ ID NO 120
LENGTH: 726
TYPE: PRT
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                 Query Match
Best Local
 Matches
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APPLICANT: SCHEIDIG, Andreas
APPLICANT: VOTSMEIER, Crinistian
APPLICANT: Ketting, Ulrich
APPLICANT: COCO, Wayne Michael
TITLE OF INVENTION: New Biological Entities And
TITLE OF INVENTION: And Diagnostic Use Thereof
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                 Local Similarity
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                 99.4%;
98.7%;
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Score 2563.5; DB 20
Pred. No. 1.8e-208;
1; Mismatches 0;
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APPLICANT: (NAKAMURA, TOShikazu
TITLE OF INVENTION: THERAPEUTIC AGENT FOR DIS
FILE REFERENCE: 2520-0101P
CURRENT APPLICATION NUMBER: US/08/605,221
CURRENT FILING DATE: 1996-03-15
NUMBER OF SEQ ID NOS: 4
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 2
LENGTH: 728
TYPE: PRT
ORGANISM: Homo sapiens
OTHER INFORMATION: HGF-A (Full length HGF)
US-08-605-221-2
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US-08-605-221-2
US-08-605-221-2
; Sequence 2, Application US/08605221
; Publication No. US20030060403A1
; GENERAL INFORMATION:
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Matches 441; Conserv
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            YTLDPHTRWEYCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDS
                                                 MTCNGESYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWC
                                                                   MTCNGESYRGLMDHTESGKI CQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWC
                                                                                                        WSSMIPHEHSFLPSSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVEC
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YTLDPHTRWEYCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDS
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APPLICANT: PFIZER INC.
APPLICANT: Hambor, John E.
APPLICANT: Hambor, John E.
APPLICANT: Roach, Marsha L.
ITILE OF INVENTION: GROWTH AND DIFFERENTIATION OF STEM CELLS
FILE REFERENCE: PC25028A
CURRENT APPLICATION NUMBER: US/10/813,805
CURRENT FILING DATE: 2004-03-30
PRIOR APPLICATION NUMBER: US 60/459,449
PRIOR APPLICATION NUMBER: US 60/459,449
INUMBER OF SEQ ID NOS: 48
SOFTWARE: PatentIn version 3.2
SEQ ID NO 10
LENGTH: 728
TYPE: PRT
ORGANISM: Homo sapiens
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Best Local Sim
Matches 441;
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Publication No. US20040191902A1
GENERAL INFORMATION:
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                 CYTGNPLIPWDYCPISRCEGDTTPTIV 442
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CYTGNPLIPWDYCPISRCEGDTTPTIV
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Pred. No. 1.8e-208;
1; Mismatches 0; I
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APPLICANT: Lietha, Daniel
APPLICANT: Lietha, Daniel
APPLICANT: Blundell, Thomas L
APPLICANT: Chirgadze, Dinitry Y
ITILE OF INVENTION: The NK1 Fragment of Hepatocyte Growth Factor/Scatter
ITILE OF INVENTION: Factor (HgF/SF) and Variants Thereof, and Their Use
FILE REFERENCE: 2502489 -991180
CURRENT APPLICATION NUMBER: US/10/475,616
CURRENT FILING DATE: 2003-10-22
PRIOR APPLICATION NUMBER: PCT/GB02/01941
PRIOR APPLICATION NUMBER: GB 0110430.6
PRIOR FILING DATE: 2001-04-27
NUMBER OF SEQ ID NOS: 2
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 2
LENGTH: 728
              Sequence 7, Application US/10498332
Publication No. US20050113284A1
GENERAL INFORMATION:
APPLICANT: Nakamura, Motonao
APPLICANT: Higuchi, Toshio
APPLICANT: Higuchi, Yoshiki
APPLICANT: Orita, Takuya
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US-10-498-332-7
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; ORGANISM: Homo
US-10-475-616-2
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APPLICANT:
APPLICANT:
APPLICANT:
TITLE OF INV
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Best Local Similarity
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 OF INVENTION: PHARMACEUTICAL AGENTS AND METHODS
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Pred. No. 1.8e-208;
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  CITY: NEW
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CURRENT APPLICATION NUMBER: US/10/498,332
CURRENT FILING DATE: 2004-06-11
PRIOR APPLICATION NUMBER: PCT/JP02/13014
PRIOR FILING DATE: 2002-12-12
PRIOR APPLICATION NUMBER: JP 2002-352924
PRIOR FILING DATE: 2002-12-04
PRIOR APPLICATION NUMBER: JP 2001-380158
PRIOR FILING DATE: 2001-12-13
NUMBER OF SEQ ID NOS: 57
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 7
LENGTH: 728
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; TYPE: PRT
; ORGANISM: Homo s
US-10-498-332-7
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US-10-133-912-18
                                                                                                                                                                                                                                                                           Sequence 18, Application US/10133912 Publication No. US20020165358A1 GENERAL INFORMATION:
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Best Local Similarity 98.7%;
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                                                               Ueda, Masatsugu
Higashio, Kanji
Yamashita, Yasushi
TITLE OF INVENTION: TCF MUTANT
NUMBER OF SEQUENCES: 25
CORRESPONDENCE ADDRESS:
ADDRESSEE: Burgess, Ry
STREET: 370 Lexington
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  Ryan and Wayne on Avenue, Suit
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Pred. No. 1.8e-208;
1; Mismatches 0;
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       Suite 2105
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; SEQUENCE DESCRIPTION: SEQ ID NO: 18: US-10-133-912-18
Sequence 19, Application US/10133912 Publication No. US20020165358A1 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/700,519
FILING DATE: 26-Aug-1996
ATTORNEY/AGENT INFORMATION:
NAME: Wayne, Milton J.
REGISTRATION NUMBER: 17,906
REFERENCE/DOCKET NUMBER: U-Wp-5240PCT
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-683-8150
TELEPHONE: 212-632-4285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:

MEDIUM TYPE: 3 1/5 inch diskette
COMPUTER: PC'S LIMITED SYSTEM 200
OPERATING SYSTEM: WORD FOR WINDOWS
SOFTWARE: MICROSOFT WINDOWS 98
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/10/133,912
FILING DATE: 25-Apr-2002
CLASSIFICATION: «Unknown»
PRIOR APPLICATION DATA:
                                                                                                                                                     366 NLSQTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPWCYTGNPLIPW
                                                                                                                                                                                                                                                                                                                                                                                                                                       246 YCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDSQYPHEHDMTP
                                                                                                                                                                                                                                                                                                                                                306 ENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSHGQDCYRGNGKNYMG
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                                                                                                                                                                                                                                     NLSQTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPWCYTGNPLIPW
                                                                                                                                                                                                                                                                                                                          ENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSHGQDCYRGNGKNYMG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LMDHTESGKI CQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWCYTLDPHTRWE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWCYTLDPHTRWE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PHEHSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVECMTCNGESYRG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 723
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Pred. No. 1.1e-207;
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SEQUENCE DESCRIPTION: SEQ ID NO:
US-10-133-912-19
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FILING DATE: 26-Aug-1996
ATTORNEY/AGENT INFORMATION:
NAME: Wayne, Milton J.
REGISTRATION UNMBER: U-Wp-5240PC
REFERENCE/DOCKET NUMBER: U-Wp-5240PC
REFERENCE/DOCKET NUMBER: U-Wp-5240PC
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-683-8150
TELEPAX: 212-532-4285
INFORMATION FOR SEQ ID NO: 19:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 437;
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COMPUTER READABLE FORM:
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CORRESPONDENCE ADDRESS:
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Higashio, Kanji
Yamashita, Yasushi
JE OF INVENTION: TCF MUTANT
BER OF SEQUENCES: 25
                                                                       HDMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSHGQDCYRGNG
                                                                                                                                                         HTRWEYCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDSQYPHE
                                                                                                                                                                                                                                         ESYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWCYTLDP
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                                                                                                                                                                                                                                                                                                                                                                                                                 ARKQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQP 120
                                                                                                                              HTRWEYCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDSQYPHE
  KNYMGNLSQTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPWCYTGN
                                                                                                                                                                                                                                                                                                   WSSMIPHEHSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVECMTCNG
                                            HDMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSHGQDCYRGNG
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STREET: 370 Lexington Avenue, Suite
CITY: NEW YORK
STATE: NEW YORK
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Yamaguchi, Kyoji
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Pred. No. 1.7e-207;
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Matches 437;

RESULT 14 US-10-133-912-19

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US-10-149-103A-1
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APPLICANT: Sim, Kim Lee
APPLICANT: Day, Clara
APPLICANT: Day, Clara
APPLICANT: Day, Clara
TITLE OF INVENTION: Compositions and Methods for Inhibiting Endothelial Cell Prolifer
FILE REFERENCE: 05213-0592 43170-274540
CURRENT APPLICATION NUMBER: US/10/149,103A
CURRENT FILING DATE: 2003-05-06
PRIOR APPLICATION NUMBER: PCT/US00/34039
PRIOR FILING DATE: 2000-12-15
NUMBER OF SEQ ID NOS: 4
SOFTWARE: Patentin version 3.1
SEQ ID NO 1
LENGTH: 727
TYDE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1, Application US/10149103A Publication No. US20040121945A1
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Matches 433;
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                                                                                                                                               RGNGKNYMGNLSQTRSGLTCSMMDKNMEDLHRHLFWEPDASKLNENYCRNPDDDAHGPWC 416
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                                                                                YTGNPLIPWDYCPISRCEGDTTPTIV 442
                                                                                                                             RGNGKNYMGNLSQTRSGLTCSMWNKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPWC
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                                                                YTGNPLIPWDYCPISRCEGDTTPTIV
                                                                                                                                                                                        YPHKHDMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSNGQDCY
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Maximum Match 100%
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2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
3: /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
4: /cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
5: /cgn2_6/ptodata/1/iaa/ETUS_COMB.pep:*
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US-09-601-040A-10
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US-09-601-040A-2
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US-09-601-040A-3
US-08-209-937B-3
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QTRSGLTC	CKDLRENYCI CKDLRENYCI	KTCADNTMNDTDVPI	TESGKI CQRWDHQTI TESGKI CQRWDHQTI	ISYRGKDLQEI SYRGKDLQEI	FNSMSSG	-	99.9 99.8 vative	ion US/ nzo et Recombi -0161P NUMBER: 2000- 2000- 2000- 2000- 2000- 2000- 2000- 2000-		563 290 711 711 711 711 711 711 711 711 711 71
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GENERAL INFORMATION:
APPLICANT: MEDICO, Enzo et al.
TITLE OF INVENTION: Recombinant Proteins from HG
FILE REFERENCE: 0471-0161P
CURRENT APPLICATION NUMBER: US/09/601,040A
CURRENT FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 28
SOFTWARE: Patentin version 3.0
SEQ ID NO 6
LENGTH: 717
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Best Local S
Matches 441
Sequence 8, Application US/09601040A
PATENT NO. 6730657
GENERAL INFORMATION:
APPLICANT: MEDICO, Enzo et al.
TITLE OF INVENTION: Recombinant Proteins from
FILE REFERENCE: 0471-0161P
CURRENT APPLICATION NUMBER: US/09/601,040A
CURRENT FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 28
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OTHER INFORMATION: Recombinant sequence derived
-09-601-040A-6
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Pred. No. 1.8e-213;
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; SEQ ID NO 8
rengTH: 717
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APPLICANT: SHIMA, NOBUYUKI
APPLICANT: HIGASHIO, KANJI
APPLICANT: NAGAO, MASAYA
APPLICANT: NAGAO, MASAYA
APPLICANT: TAKAOKA, HIROAKI
APPLICANT: TSUDA, EISUKE
TITLE OF INVENTION: PLASMIDS,
TITLE OF INVENTION: PLASMIDS,
TITLE OF INVENTION: SUBSTANCE
TITLE OF INVENTION: SUBSTANCE
                                                                                                                                                                                                                                                                                                                                         Sequence 1 Patent No.
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Best Local :
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ORGANISM: Artificial S
FEATURE:
OTHER INFORMATION: Rec
                                                                                      NUMBER OF SEQUENCES: 111
CORRESPONDENCE ADDRESS:
ADDRESSEE: MILLEN, WHITE
STREET: 2200 CLARENDON BI
CITY: ARLLNGTON
STATE: VA
ZIF: 4401
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PC-DOS/MS-DOS
                                                             ZIP: 22201
                                                                         COUNTRY:
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Pred. No. 1.8e-213;
l; Mismatches 0;
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Query Match
Best Local S
Matches 441
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OTHER INFORMATION: /.
OTHER INFORMATION: SI
FEATURE:
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INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: 723 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: WHITE, JOHN L.

REGISTRATION NUMBER: 17,746
REFERENCE/DOCKET NUMBER: WAK
TELECOMMUNICATION INFORMATION:
TELEPHONE: 703-243-6333
TELEFAX: 703-243-6410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/JP91/00942
FILING DATE: 15-JUL-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 185852-1990
APPLICATION NUMBER: JP 185852-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: |
ORIGINAL SOURCE:
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LOCATION: 605..623
OTHER INFORMATION: 0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
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Similarity 99.8%;
                 HDMTPENFKCKDLRENYCRNPDGSESPWCFTTDPNIRVGYCSQIPNCDMSHGQDCYRGNG
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                                                                                           HTRWEYCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDSQYPHE
                                                                                                                                             ESYRGLMDHTESGKICQRWDHQTPHRHKFLPERYPDKGFDDNYCRNPDGQPRPWCYTLDP
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HDMTPENFKCKDLRENYCRNPDGSESPWCFTTDPN1RVGYCSQ1PNCDMSHGQDCYRGNG
                                                                      HTRWEYCAIKTCADNTMNDTDVPLETTECIQGQGEGYRGTVNTIWNGIPCQRWDSQYPHE
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13-JUL-1990
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SEQUENCE IN ALPHA-CHAIN"
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US-08-290-937B-1
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GENERAL INFORMATION:
                                                                                                                                                                         Best Local Sim
Matches 441;
                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                     TELEFAX: (617) 248-71
INFORMATION FOR SEQ ID NO:
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APPLICANT:
APPLICANT:
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                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 723 amino acids
TYPE: amino acid
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 248-7000
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NAME: CAMPBELL, PAULA A.
REGISTRATION NUMBER: 32,
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
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121 WSSMIPHEHSYRGKDLQENYCRNPRGEEGGPWCFTSNPEVRYEVCDIPQCSEVECMTCNG
                                                                61 ARKQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQP 120
                                                                                                               32 QRKRRNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDK
                                                                                                                              1 ERKRRNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDK
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NT: MASUNAGA, HIROAKI
NT: TAKAHIRA, REIKO
NT: OOGAKI, FUMIKO
NT: UEDA, MASATSUGU
NT: HIGASHIO, KANJI
NT: HIGASHIO, MODIFIED T
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                                                 ARKOCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCOP
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125 High St.
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linear
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, NOBUYUKI
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                                                                                                                                                                          Score 2576; DB 1;
Pred. No. 1.9e-213;
1; Mismatches 0;
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MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible
COMPUTER: Floppy disk

COMPUTER: Floppy disk

COMPUTER: IBM PC compatible
COMPUTER: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/290,937B

FILING DATE: 19-AUG-1994

CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: CAMPBELL, PAULA A.
REGISTRATION NUMBER: FJN-022
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 248-7000
TELEPHONE: (617) 248-7100
INFORMATION FOR SEQ ID NO: 2:
TELEPHOR C CHARACTERISTICS:
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GENERAL INFORMATION:
 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: MASUNAGA, APPLICANT: TAKAHIRA, APPLICANT: OOGAKI, I APPLICANT: UEDA, MAAAPPLICANT: HIGASHIO, TITLE OF INVENTION:
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APPLICANT:
APPLICANT:
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                                            LENGTH: 723 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: HIGASHIO, KANJI
TITLE OF INVENTION: MODIFIED
NUMBER OF SEQUENCES: 13
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CITY: Boston
STATE: MA
COUNTRY: USA
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125 High St.
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UEDA, MASATSUGU
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TAKAHIRA, REIKO
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GOTO, MASAAKI
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 99.9%;
 Score
 2576;
 DВ
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Length 723;
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RESULT 7
US-08-404-643-1
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                COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Ver
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/404,643
FILING DATE: 15-MAR-1995
CLASSIFICATION: 436
ATTORNEY/AGENT INFORMATION:
NAME: CAMPBELL, PAULA A
REGISTRATION NUMBER: 32,503
REFERENCE/DOCKET NUMBER: FJN-034 (38
REFERENCE/DOCKET NUMBER: FJN-034 (38
TELECOMMUNICATION INFORMATION:
TELEPAX: (617)-248-7100
INFORMATION FOR SEQ ID NO: 1:
COCUMENT UND FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: HIGASHIO, KANJI
APPLICANT: SHIMA, NOBUYUKI
APPLICANT: OCGAKI, FUMIKO
TITLE OF INVENTION: MONOCLONAL
NUMBER OF SEQUENCES: 1
TELEFAX: (617)-248-710
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                                                                                              STREET: 53 ST.
CITY: BOSTON
STATE: MA
COUNTRY: USA
ZIP: 02109
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1; Mismatches 0;
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                                                                                                                                                                                                                                                                                                    Version
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APPLICANT: Kinosaki, Masahiko
APPLICANT: Kinosaki, Hiromi
APPLICANT: Masanuga, Hiromi
APPLICANT: Masanuga, Hiroaki
APPLICANT: Mobayashi, Funde
APPLICANT: Yamaguchi, Kyoji
APPLICANT: Higashio, Kanji
TITLE OF INVENTION: Agent for Preventing and/or Treating Renal Disease
FILE REFERENCE: FJN-069
CURRENT APPLICATION NUMBER: US/09/194,326
CURRENT APPLICATION NUMBER: PCT/JP98/01221
EARLIER APPLICATION NUMBER: PCT/JP98/01221
EARLIER FILING DATE: 1998-03-20
EARLIER FILING DATE: 1998-03-20
EARLIER FILING DATE: 1997-03-28
NUMBER: OF SEQ ID NOS: 3
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 1
LENGTH: 723
TYPE: PRT
ORGANISM: Homo sapiens
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US-09-194-326-1
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                                ; FEATURE:
; OTHER INFORMATION:
US-09-194-326-1
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Best Local Similarity 99.8
Matches 441; Conservative
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Query Match
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STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
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Pred. No. 1.9e-213;
 Score
2576;
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APPLICANT: MEDICO, Enzo
APPLICANT: MICHIELI, Paolo
APPLICANT: MICHIELI, Chiara
APPLICANT: CASELLI, Gianfranco
APPLICANT: CASELLI, Gianfranco
APPLICANT: COMOGLIO, Paolo
TITLE OF INVENTION: RECOMBINANT PROTEINS DERIVED FRO
FILE REFERENCE: 0471-0162P
CURRENT APPLICATION NUMBER: US/09/600,991
CURRENT FILING DATE: 2001-08-20
NUMBER OF SEQ ID NOS: 22
SOPTWARE: Patentin version 3.1
SEQ ID NO 18
LENGTH: 723
TYPE: PRT
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US-09-600-991-18
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US-09-600-991-18
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Best Local Similarity 99.8%;
Matches 441; Conservative
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Pred. No. 1.9e-213; 
1; Mismatches 0; Indels
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Patent No. 6699837

Patent No. 6699837

GENERAL INFORMATION:
APPLICANT: NAKAMURA, Toshikazu
TITLE OF INVENTION: THERAPEUTIC AGENT FOR DISORDER IN BRAIN
FILE REFERENCE: 2520-0101P
CURRENT APPLICATION NUMBER: US/08/605,221
CURRENT FILING DATE: 1996-03-15
NUMBER OF SEQ ID NOS: 4
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 4
LENGTH: 723
TYPE: PRT
ORGANISM: Homo sapiens
OTHER INFORMATION: HGF-B (five amino acids deletion type)
US-08-605-221-4
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US-08-605-221-4
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Pred. No. 1.9e
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Sequence 2, Application US/09601040A

Patent No. 6730657

GENERAL INFORMATION:
APPLICANT: MEDICO, Enzo et al.
TITLE OF INVENTION: Recombinant Proteins from FILE REFERENCE: 0471-0161P
CURRENT FILLING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 28
SOFTWARE: PatentIn version 3.0
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SEO ID NO 10
LENGTH: 723
TYPE: PRT
ORGANISM: Homo sapiens
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APPLICANT: MEDICO, Enzo et al.
APPLICANT: MEDICO, Enzo et al.
TITLE OF INVENTION: Recombinant Proteins from
FILE REFERENCE: 0471-0161P
CURRENT APPLICATION NUMBER: US/09/601,040A
CURRENT FILING DATE: 2000-09-08
NUMBER OF SEO ID NOS: 28
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Pred. No. 1.9e-213;
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MSP

420

451

360 331 300 271 240 211

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; Sequence 4, Application US/09601040A
; Patent No. 6730657
; Patent No. 6730657
; GENERAL INFORMATION:
APPLICANT: MEDICO, Enzo et al.
TITLE OF INVENTION: Recombinant Proteins from HGF and FILLE REFERENCE: 0471-01611
CURRENT APPLICATION NUMBER: US/09/601,040A
CURRENT FILING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 28
SOFTWARE: PatentIn version 3.0
; SEQ ID NO 4
; LENGTH: 729
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                                                                                                                                                         ; FEATURE:
; OTHER INFORMATION: Recombinant sequence derived from Homo sapiens
US-09-601-040A-4
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US-09-601-040A-4
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                                                                                                Query Match
Best Local Similarity
Matches 441; Conserv
                                                                                                                                                                                                      TYPE: PRT
ORGANISM: Artificial Sequence
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OTHER INFORMATION: Recombinant sequence derived from Homo sapiens
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TYPE: PRT
ORGANISM: Artificial Sequence
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ARKQCLWFPFNSMSSGVKKEFGHEFDLYENKDYIRNCIIGKGRSYKGTVSITKSGIKCQP
                                  QRKRRNTIHEFKKSAKTTLIKIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDK
                                                   ERKRRNT1HEFKKSAKTTL1KIDPALKIKTKKVNTADQCANRCTRNKGLPFTCKAFVFDK
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                                                                                                Score 2576; DB 4;
Pred. No. 1.9e-213;
1; Mismatches 0;
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Pred. No. 1.9e-213;
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TELEFAX: (516) 742-4360 TELEX: 230 901 SANS UR INFORMATION FOR SEQ ID NO:

TELEPHONE: (516) 742-4366

SEQUENCE CHARACTERISTICS:

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LENGTH:

723 amino acids

TYPE: amino acid TOPOLOGY: linear

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US-08-030-410-3
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APPLICANT: Komiyam
APPLICANT: Nakahat
APPLICANT: Kubo, T
APPLICANT: Tanaka,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 3, Application US/08030410 Patent No. 6221359
NAME: DIGIGIO, Frank S. 346
REGISTRATION NUMBER: 31,346
REFERENCE/DOCKET NUMBER: 88:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (516) 742,4343
                                                                                       APPLICATION NUMBER: US/01
FILING DATE: 19930521
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Kojima, Katsuaki
TITLE OF INVENTION: HEMOPOIETIC
NUMBER OF SEQUENCES: 5
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                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                   CITY: Garden City
STATE: New York
                                                                                                                                                                                                                                                                                                                                        STREET:
                                                                                                                                                                                                                                                                                 COUNTRY:
                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                             Tanaka, Ryuhei
Kawano, Genji
Sudo, Tetsuo
Sano, Emiko
                                                                                                                                                                                                                                                                                     United States
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Nakahata, Tatsutoshi
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US-08-290-937B-3
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/O
FILING DATE: 19-AUG-1994
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
                                                                      ZIP: 02110
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
                                                                                                                                                                                                                                                        APPLICANT: UEDA, MASATSUGU
APPLICANT: HIGASHIO, KANJI
TITLE OF INVENTION: MODIFIED
NUMBER OF SEQUENCES: 13
                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                  STREET: 125
CITY: Bosto
STATE: MA
COUNTRY: US
ZIP: 02110
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Similarity 99.5%;
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125 High St.
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MASUNAGA, HIROAKI
TAKAHIRA, REIKO
OOGAKI, FUMIKO
                                                                                                                                                                    USA
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GOTO, MASAAKI
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SHIMA, NOBUYUKI
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Pred. No. 3.4e-213;
Wismatches 0;
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REGISTRATION NUMBER: 32,503
REFERENCE/DOCKET NUMBER: FUN
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 248-7000
TELEPAX: (617) 248-7100
INFORMATION FOR SEQ ID NO: 3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 723 amino acids
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                     PLIPWDYCPISRCEGDTTPTIV 442
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                                                                                     KNYMGNLSQTRSGLTCSMWDKNMEDLHRHIFWEPDASKLNENYCRNPDDDAHGPWCYTGN
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 PLIPWDYCPISRCEGDTTPTIV
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Pred. No. 6.1e-213;
1; Mismatches 1;
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Search completed: October Job time : ω • 2005, 06:53:49

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